FORM NO. 3313-538

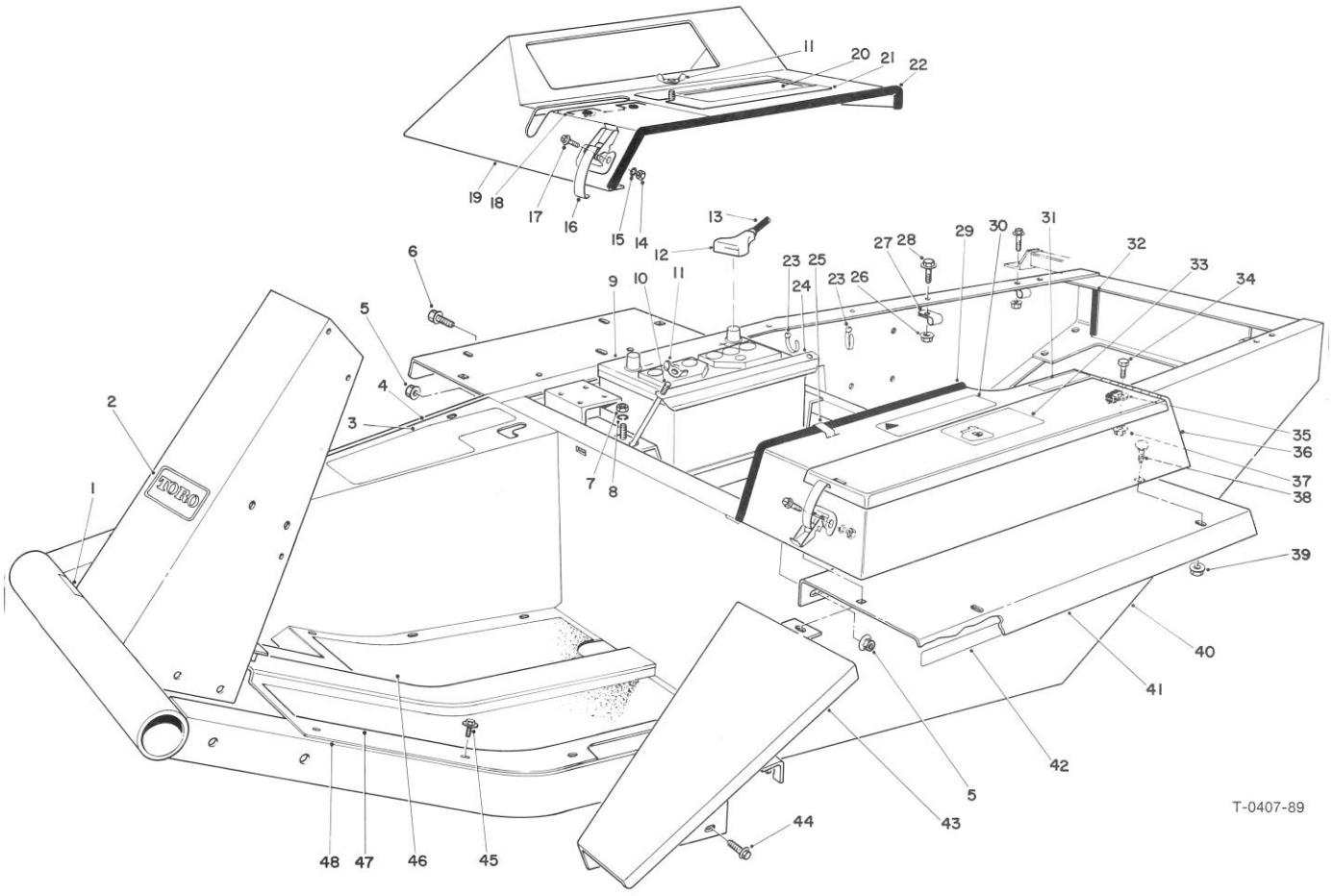
TORO®

MODEL NO. 30788 — 90001 & UP
MODEL NO. 30721 — 90001 & UP
MODEL NO. 30710 — 90001 & UP

PARTS CATALOG

GROUNDSMASTER® 322-D

(WITH POWER STEERING)



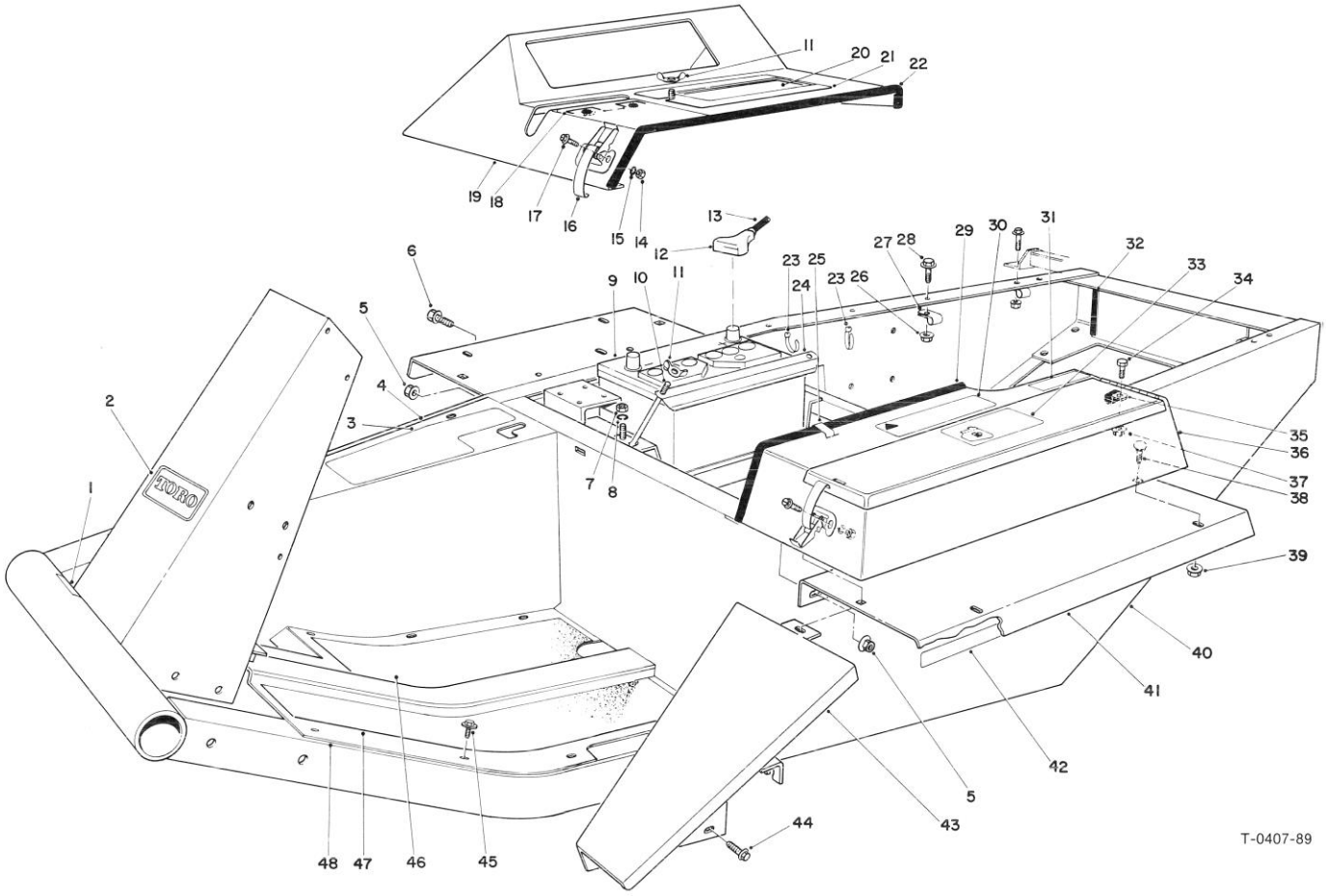
MAIN FRAME

Ref. No.	Part No.	Description	No. Used
1	27-7320	Decal — Traction Pedal	1
2	63-3280	Decal — Toro	1
3	66-6390	Decal — Caution	1
4	21-2660	Footrest	1
5	32128-21	Flange Locknut	6
6	3234-12	Flange Hex Hd Screw	4
7	3217-6	Nut	2
8	3253-4	Lockwasher	2
9		Battery Type MF24-78	1
10	24-6390	Stud Battery Hold Down	2
11	32103-2	Wing Nut	3
12	28-1280	Cable Boot	1
13	70-1180	Cable — Battery Positive (Incl. Ref. #12)	1

Ref. No.	Part No.	Description	No. Used
14	3217-26	Nut	6
15	3253-17	Lockwasher	4
16	249-21	Hook Clamp	3
17	3290-144	Machine Screw	6
18	27-7290	Decal — Power Take Off	1
19	38-4550	Instrument Cover	1
20	43-4290	Decal — Starting Instructions	1
21	24-9740	Cover — Battery Access	1
22	39-8020	Trim — Instrument Cover	1
23	3290-378	Cable Tie	2
24	24-6420	Hold Down Battery	1
25	2412-61	Clip Tinnerman	2
26	3290-357	Locknut w/Flange	5
27	2412-4	Clamp	4

†Obtain Locally

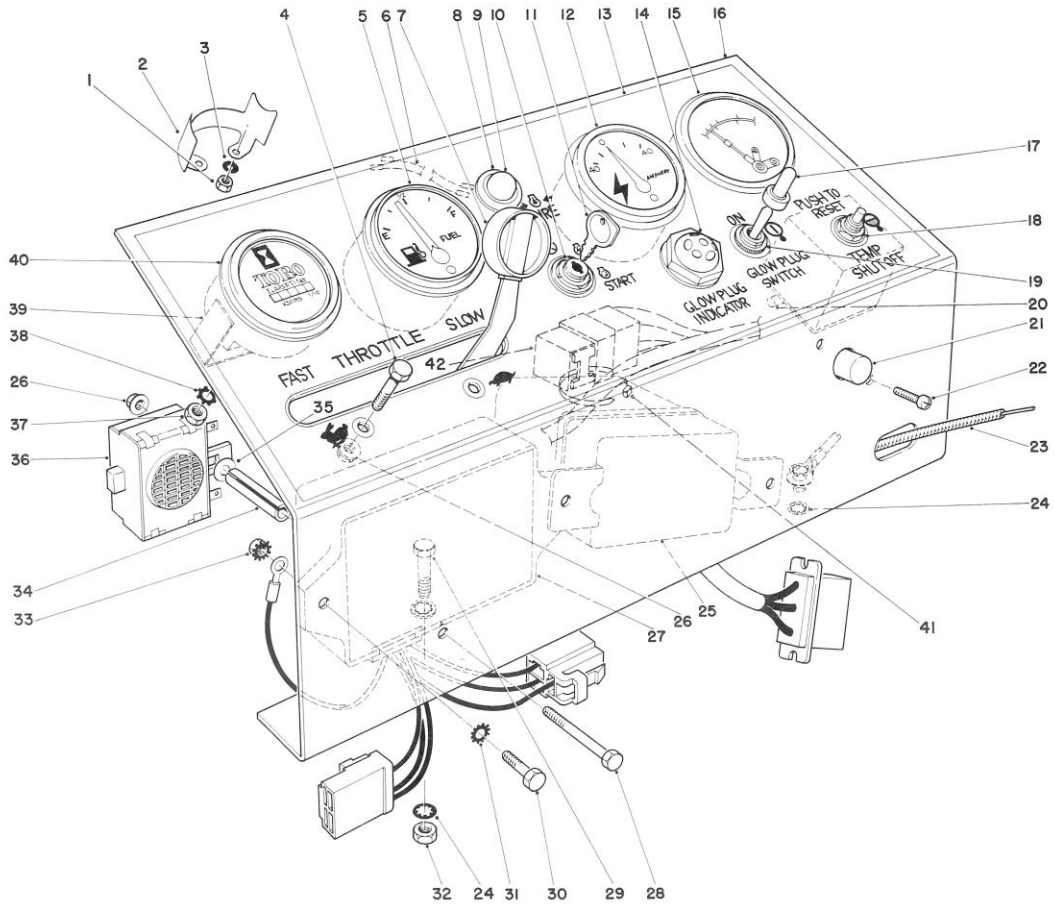
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MAIN FRAME (Continued)

Ref. No.	Part No.	Description	No. Used
28	3234-11	Capscrew w/Locking Flange	5
29	37-9650	Trim	1
30	67-1710	Decal — Caution	1
31	49-2280	Decal — Diesel Fuel	1
32	43-4300	Trim — Rear Frame	2
33	27-7310	Decal — Refueling	1
34	322-5	Capscrew	1
35	2412-74	Clamp	1
36	38-4530	Tool Box	1
37	32128-20	Nut — Flange Lock	1
38	3229-10	Carriage Bolt	5

Ref. No.	Part No.	Description	No. Used
39	3256-23	Flange Locknut	5
40	68-4300	Frame	1
41	68-8200	Fender	2
42	67-1720	Decal — Torque	2
43	68-8610	Fender — Extension	1
44	3234-14	Hex. Hd. Capscrew	2
45	12-3270	Screw, Self-Tapping	11
46	21-2770	Pad — Foot Rest R.H.	1
47	21-2760	Pad — Foot Rest L.H.	1
48	23-5220	Floor Plate	1



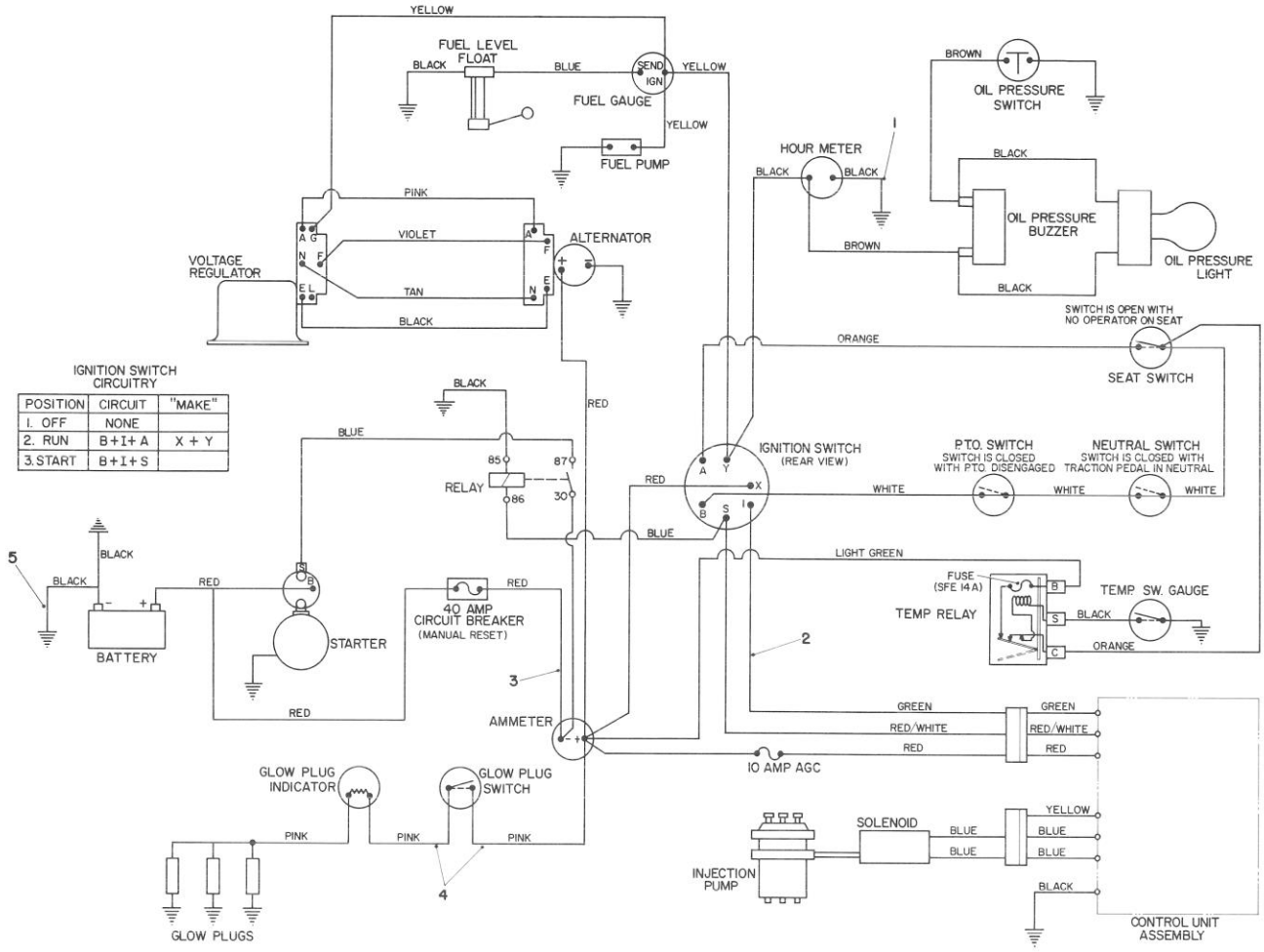
T-0408-89

INSTRUMENT PANEL ASSEMBLY

Ref. No.	Part No.	Description	No. Used
1	3219-14	Nut	4
2	38-1670	Clamp Mounting	2
3	3253-17	Lockwasher	4
4	3290-134	Hex Hd. Machine Screw	2
5	38-1650	Fuel Gauge (Incl. Ref. #1-3)	1
6	44-2220	Wire Lead	2
7	233-35	Knob	1
8	44-2210	Warning Light (Incl. Ref. #9)	1
9	218-533	Lens	1
10	27-2360	Key Switch (Incl. Ref. #11)	1
11	63-8360	Key	1
12	38-1660	Ammeter (Incl. Ref. #1-3)	1
13	43-3980	Decal — Instrument Panel	1
14	42-9190	Glow Lamp	1
15	26-6750	Engine Temperature Gauge	1
16	43-3970	Panel — Instrument	1
17	218-473	Toggle Switch Boot	1
18	26-6740	Temperature Reset Relay	1
19	6-1659	Toggle Switch (Incl. Ref. #17)	1
20†		Fuse, Temp. Relay 14 Amp. SFE	1
21	43-4000	Circuit Breaker	1

Ref. No.	Part No.	Description	No. Used
22	3250-17	Screw Machine Cross Recess Pan Hd.	2
23	43-3990	Throttle Control (Incl. Ref. #7)	1
24	3254-2	Lockwasher Intl. Tooth	4
25	43-0410	Regulator Assembly	1
26	32128-17	Locknut Flanged	3
27	43-1880	Control Unit Assembly	1
28	3290-424	Hex. Hd. Machine Screw	1
29	322-5	Capscrew	2
30	321-4	Capscrew	3
31	3255-7	Lockwasher Ext. Tooth	3
32	3217-6	Hex Nut	2
33	32149-2	Locknut	3
34	43-3820	Spacer	1
35	3256-14	Washer, Plain	1
36	22-7820	Buzzer Assembly	1
37	3217-26	Nut	1
38	3254-1	Lockwasher	1
39	218-515	Mounting Bracket	1
40	12-9990	Hour Meter (Incl. Ref. #37-39)	1
41	3290-379	Cable Tie	1
42	63-7590	Relay	1

†Obtain Locally

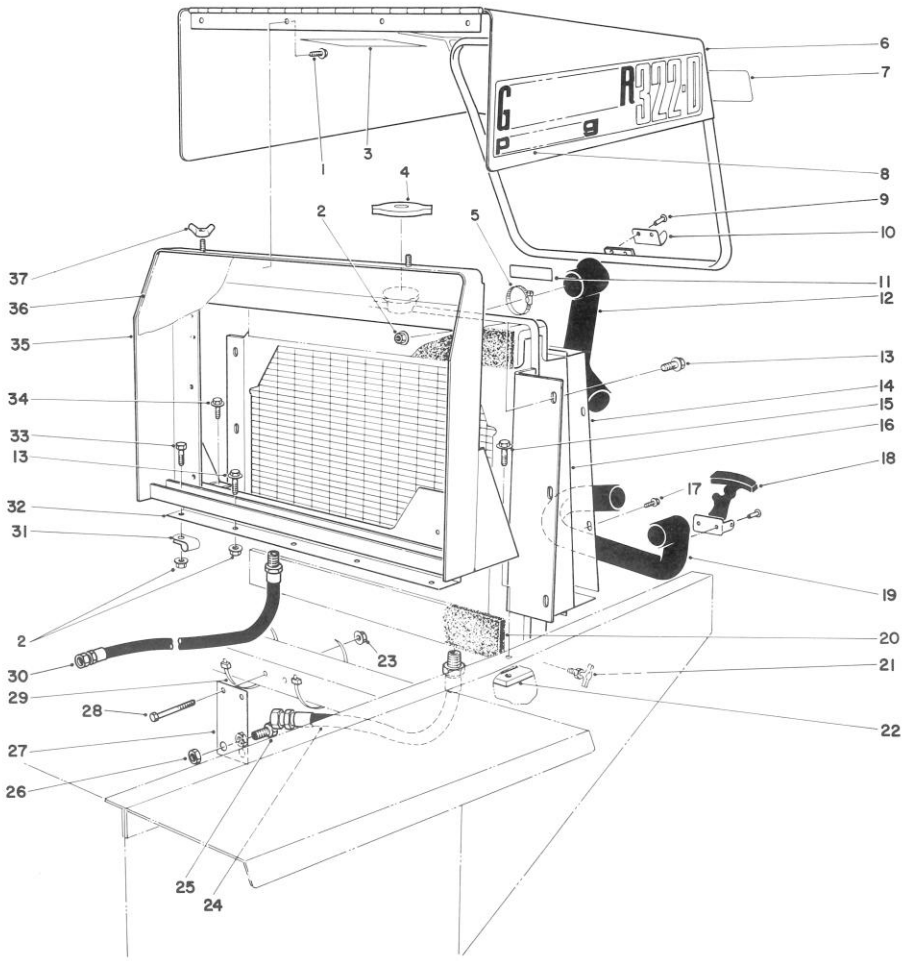


T-0409-89

ELECTRICAL SCHEMATIC

Ref. No.	Part No.	Description	No. Used
1	21-2370	Wire Hour Meter Ground	1
2	70-1230	Wire Harness Assembly	1
3	43-4040	Wire Assembly	1

Ref. No.	Part No.	Description	No. Used
4	43-4010	Wire Assembly	2
5	70-1190	Ground Cable	1

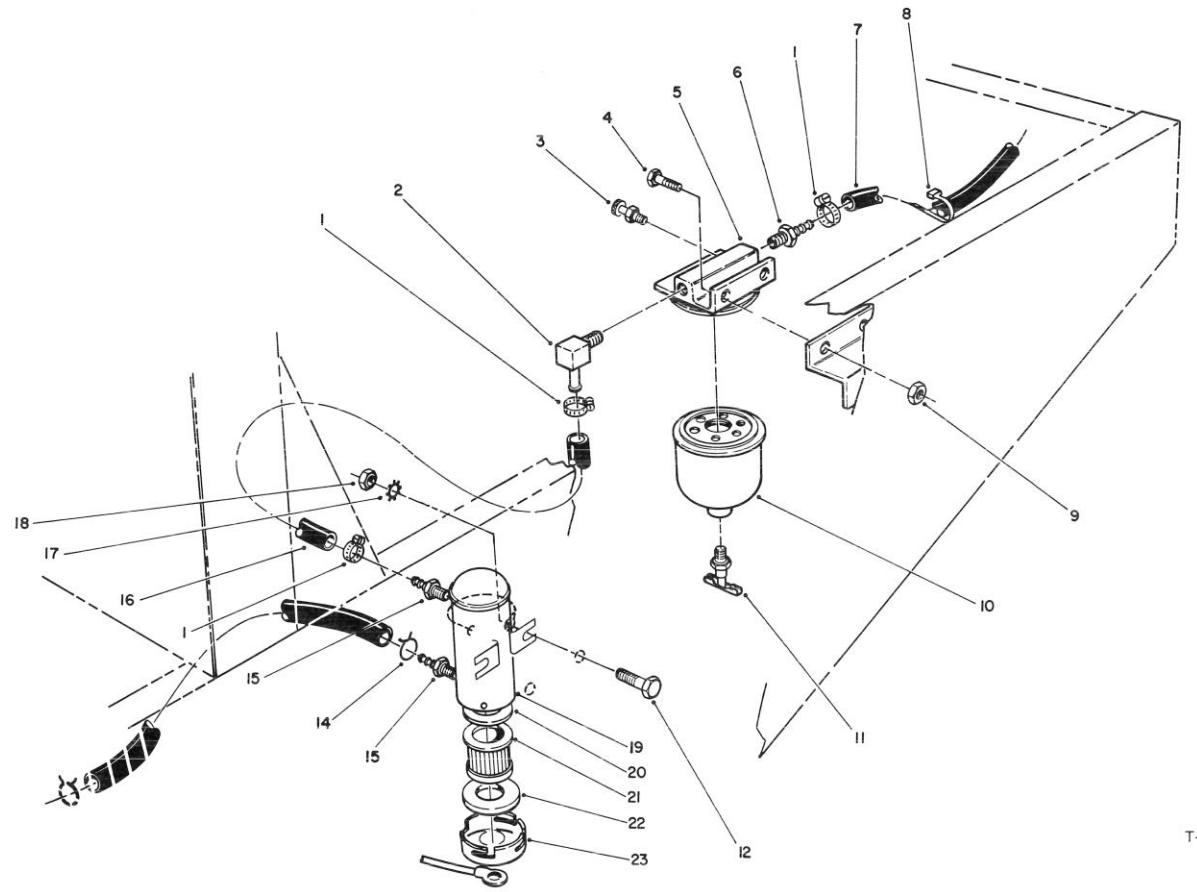


T-0410-89

RADIATOR & HOOD ASSEMBLY

Ref. No.	Part No.	Description	No. Used
1	32144-10	Screw, Self-Tapping	4
2	32128-20	Hex Nut Flanged	11
3	26-7530	Decal Engine Coolant	1
4	18-2660	Radiator Pressure Cap Assy.	1
5	2412-3	Hose Clamp	4
6	12-5899	Hood	1
7	66-6140	Decal — Toro	1
8	67-7760	Decal — Groundsmaster 322-D	2
9	3269-16	Rivet	4
10	60-8660	Keeper	1
11	54-0890	Decal Warning	1
12	43-3350	Hose Upper Radiator	1
13	3234-14	Screw Hex Flange	11
14	43-3330	Radiator Shroud	1
15	3234-1	Screw-Cap Locking Hex Flange Hd.	2
16	33-2570	Radiator Assembly	1
17	32104-116	Screw Self Tapping	8
18	60-8670	Flexible Draw Latch	1
19	43-7020	Hose — Lower Radiator	1

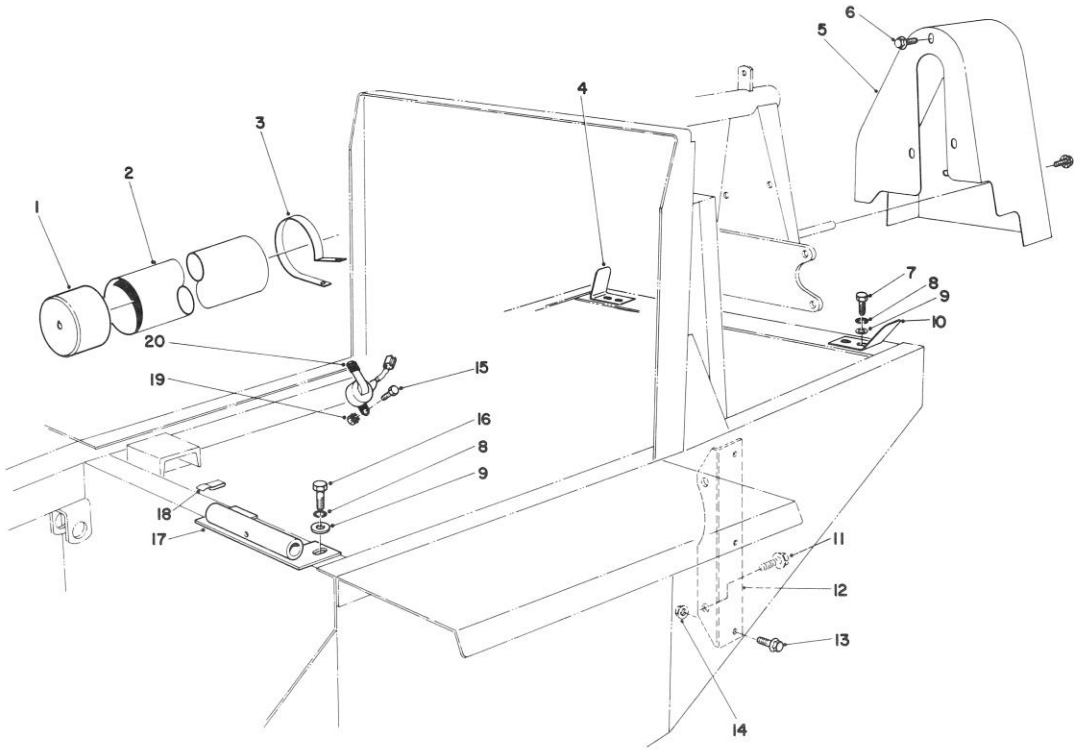
Ref. No.	Part No.	Description	No. Used
20	43-3320	Foam — Radiator	2
21	304-46	Drain Cock	1
22	38-4600	Bar — Frame L.H.	1
23	32128-21	Flange Nut	2
24	63-9010	Hose Assembly — Cooler to Pump	1
25	340-71	Union — Bulkhead	2
26	340-70	Locknut — Bulkhead	2
27	68-9160	Bracket	1
28	323-12	Hex. Hd. Capscrew	2
29	3290-379	Cable Tie	4
30	63-8960	Hose Assembly — Valve to Cooler	1
31	2412-4	Clamp	1
32	43-3340	Grille — Sealing Plate	1
33	322-5	Capscrew	1
34	11-0590	Capscrew Self Tapping	2
35	43-3390	Radiator Support	1
36	43-3410	Grille	1
37	32103-2	Wing Nut	2



FUEL FILTER ASSEMBLY

Ref. No.	Part No.	Description	No. Used
1	2412-36	Hose Clamp	3
2	304-96	90° Hose Barb	1
3	63-8290	Vent	1
4	321-4	Capscrew	2
5	63-8280	Head Assembly	1
6	353-975	Hose Barb	1
7	63-9720	Hose	1
8	3290-378	Cable Tie	A/R
9	3296-42	Nut	2
10	63-7650	Element — Fuel Filter	1
11	63-8310	Drain Valve	1
12	321-6	Capscrew	2

Ref. No.	Part No.	Description	No. Used
13	353-702	Hose Barb	1
14	2412-6	Hose Clamp	1
15	304-73	Hose Barb	1
16	63-9650	Hose	1
17	3255-7	External Tooth Lock Washer	2
18	32149-2	Nut	2
19	53-8150	Pump Assy., Fuel, Electric (Incl. Ref. #20-23)	1
20	43-2570	Gasket	1
21	43-2550	Filter	1
22	43-2560	Gasket	1
23	43-2580	Magnet	1

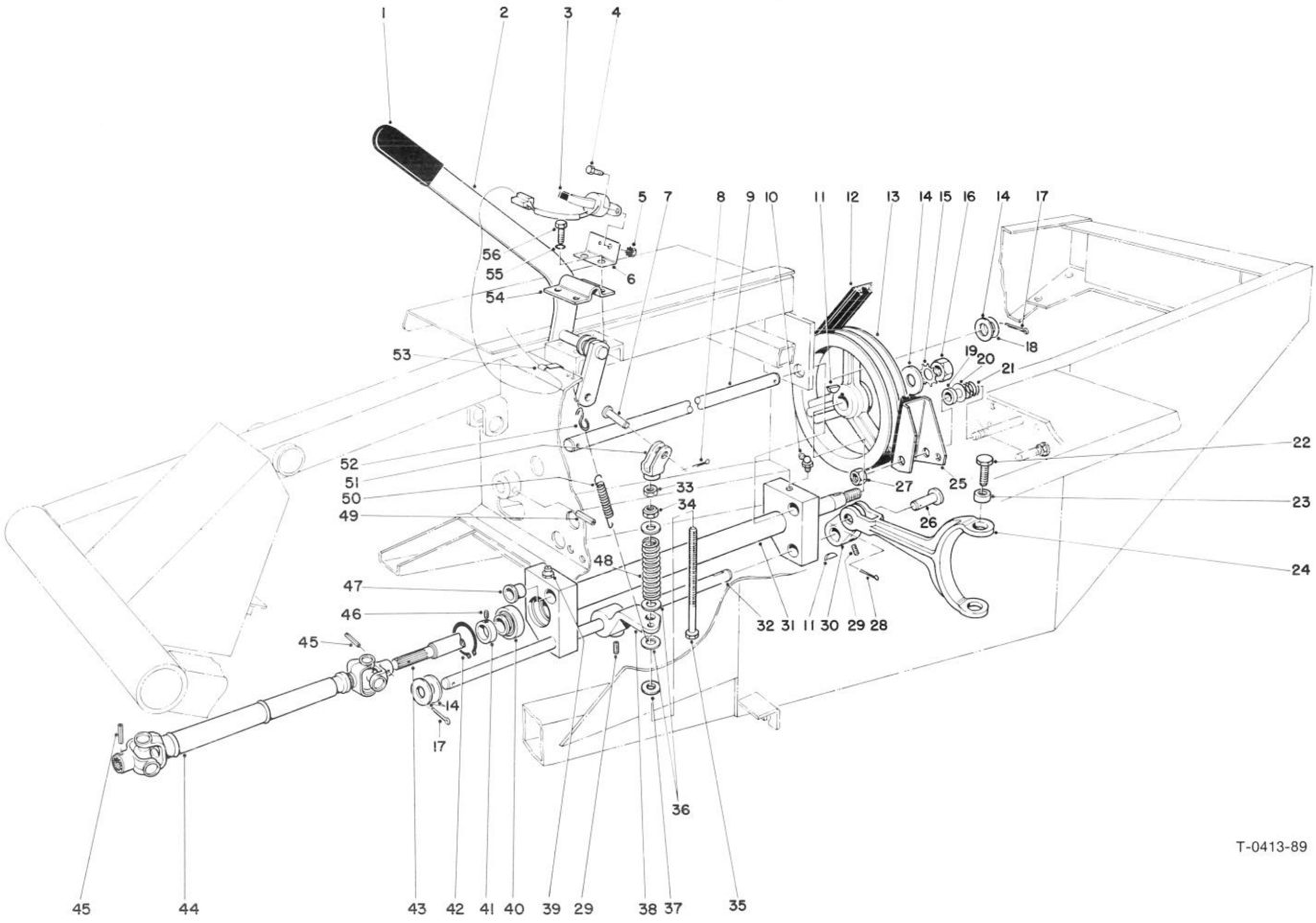


T-0412-89

INTERLOCK ASSEMBLY

Ref. No.	Part No.	Description	No. Used
1	65-5890	Cap	2
2	65-5870	Tube — Manual	1
3	2412-102	"R"-Clamp	2
4	62-3010	Bracket, R.H.	1
5	43-3900	Guard Fan Belt	1
6	3234-14	Capscrew	5
7	322-5	Screw, Self-Tapping	4
8	3253-4	Lockwasher	6
9	3256-23	Washer	5
10	62-3020	Bracket, L.H.	1

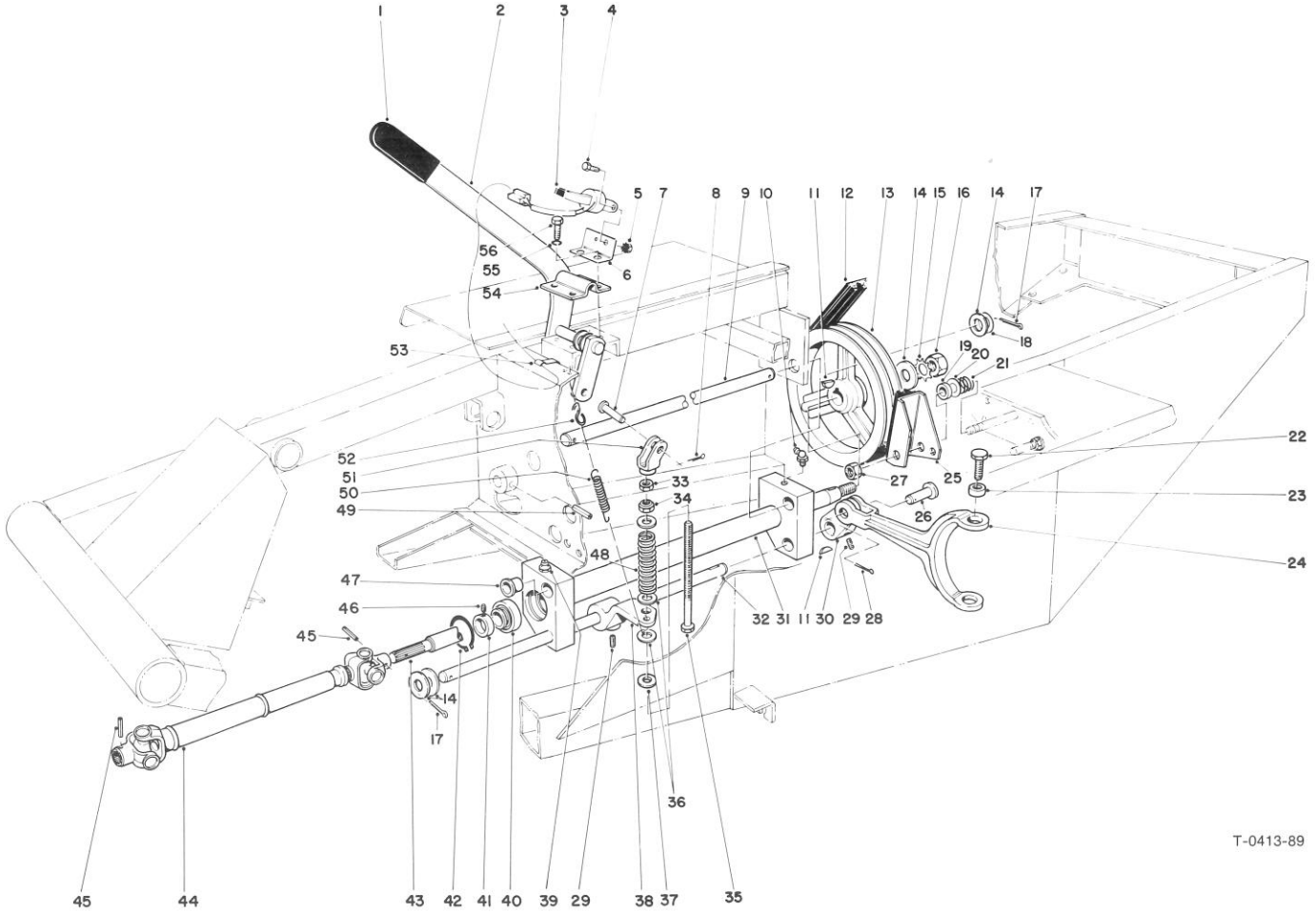
Ref. No.	Part No.	Description	No. Used
11	3234-6	Capscrew w/Locking Flange	2
12	67-8190	Bracket — Engine Support	2
13	3234-11	Capscrew w/Locking Flange	6
14	3290-357	Nut w/Locking Flange	6
15	321-2	Capscrew	2
16	3234-17	Capscrew	2
17	27-9810	Seat Pivot	1
18	212-93	Wire Clip	2
19	3296-42	Locknut Nylon Insert	1
20	29-6930	Switch	1



POWER TAKE OFF ASSEMBLY

Ref. No.	Part No.	Description	No. Used
1	21-1880	Grip Handle	1
2	21-1550	Lever — P.T.O.	1
3	29-6930	Switch Arm	1
4	321-2	Capscrew	1
5	3296-42	Locknut	1
6	27-7260	Mount — Arm Switch	1
7	283-42	Clevis Pin	1
8	3272-10	Cotter Pin	1
9	43-3860	Shaft — Pivot P.T.O.	1
10	302-10	Grease Fitting	1
11	3257-5	Woodruff Key	3
12	53-9660	V-Belt Torque Team	1
13	21-0230	Pulley P.T.O.	1
14	3256-28	Washer	4
15	3254-7	Lockwasher	1
16	3219-7	Nut	1
17	3272-22	Cotter Pin	2
18	3-6498	Washer	A/R
19	3-8812	Spacer	1
20	3256-6	Washer	1
21	5-1747	Spring	1
22	30-2120	Capscrew Hex. Hd.	2
23	43-3800	Bushing — P.T.O. Fork	2

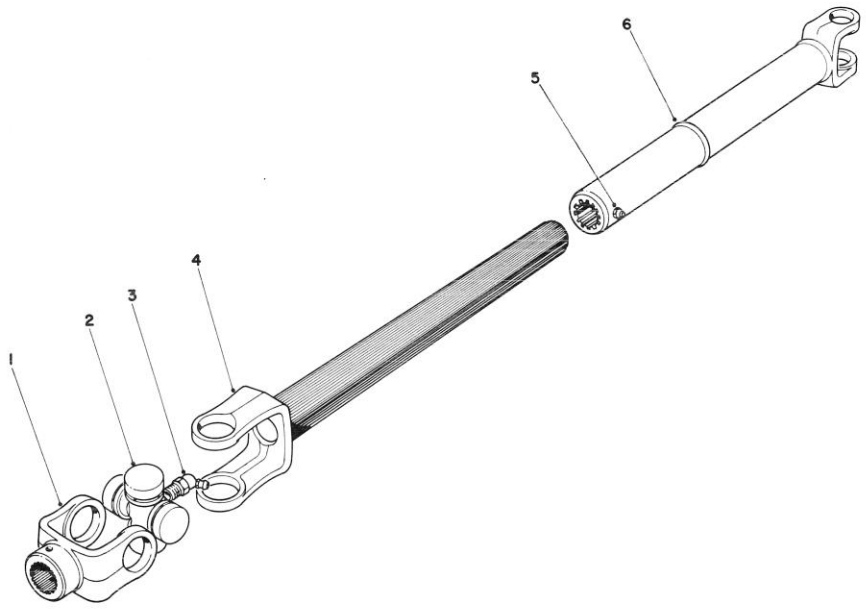
Ref. No.	Part No.	Description	No. Used
24	43-5610	Fork P.T.O.	1
25	27-7370	Brake Assembly P.T.O.	1
26	283-8	Clevis Pin	1
27	3296-28	Locknut	1
28	3272-11	Cotter Pin	1
29	3246-3	Set Screw	4
30	43-5590	Arm — P.T.O.	1
31	43-5500	Pivot P.T.O.	1
32	43-5550	Shaft — Actuator P.T.O.	1
33	3219-3	Nut	1
34	3296-6	Locknut	1
35	27-7900	Screw — Adjusting	1
36	3256-41	Washer	3
37	5-0652	Spacer	1
38	43-5570	Arm, Actuator — P.T.O.	1
39	302-2	Grease Fitting	1
40	251-252	Ball Bearing (Incl. Ref. #41)	2
41	251-234	Lock Collar (Incl. Ref. #46)	2
42	32120-22	Ring Retaining	2
43	43-5540	Shaft P.T.O.	1
44	62-4260	Drive Shaft Assembly	1
45	32121-34	Roll — Pin	2
46	3245-1	Set Screw	2



POWER TAKE OFF ASSEMBLY (Continued)

Ref. No.	Part No.	Description	No. Used
47	256-113	Flanged Bushing	4
48	21-0400	Spring — Compression	1
49	32121-9	Roll Pin	1
50	21-1830	Spring — Tension	1
51	43-5630	Yoke P.T.O.	1

Ref. No.	Part No.	Description	No. Used
52	5-0701	Spring — Anchor	1
53	212-93	Wire Clip	1
54	21-1600	Clamp P.T.O. Lever	1
55	3253-21	Lockwasher	4
56	32104-6	Hex Hd. Self Tapping Screw	4

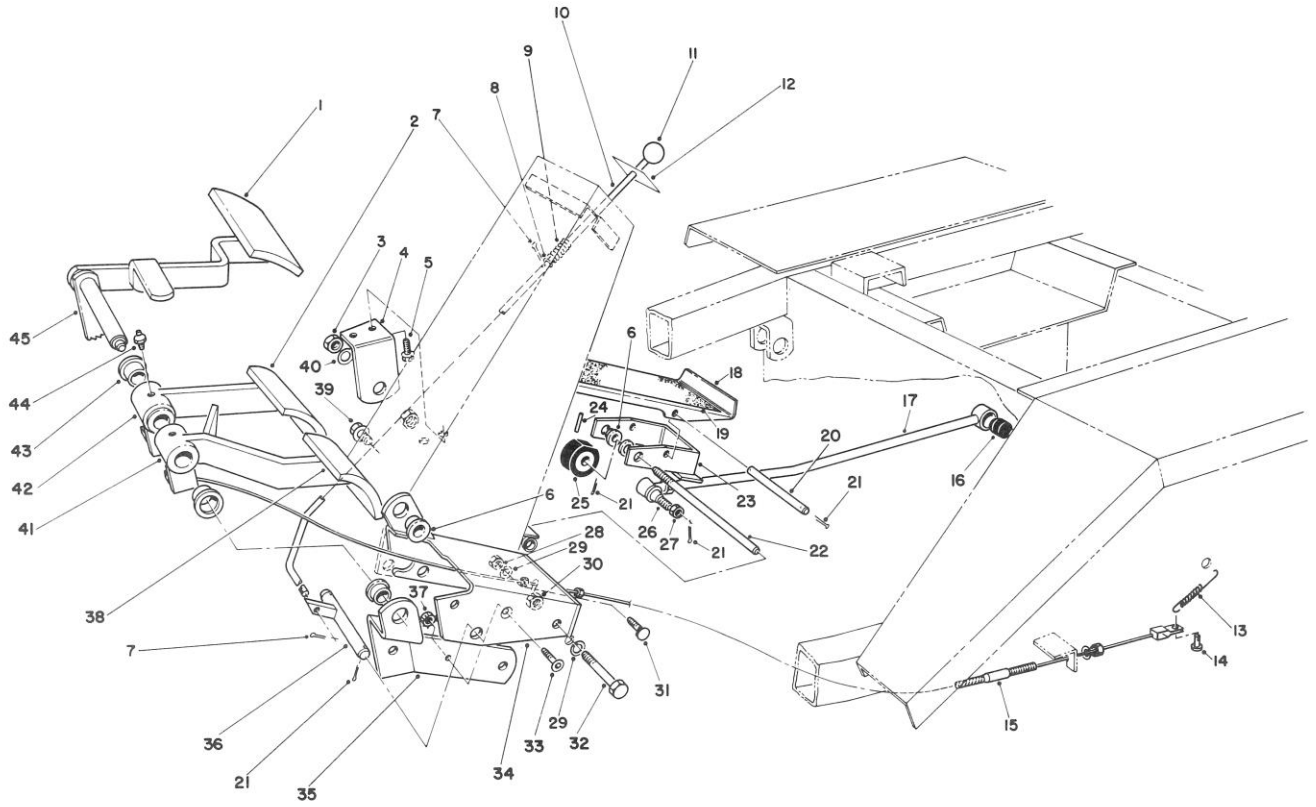


T-0414-89

DRIVE SHAFT ASSEMBLY NO. 62-4260

Ref. No.	Part No.	Description	No. Used
1	62-3800	End Yoke	2
2	54-9180	U-Joint Kit	2
3	62-3820	Grease Fitting	2

Ref. No.	Part No.	Description	No. Used
4	~~63-3290~~ 62-3290	Slip Yoke Shaft	1
5	62-3880	Grease Fitting	1
6	62-3790	Slip Yoke Tube	1

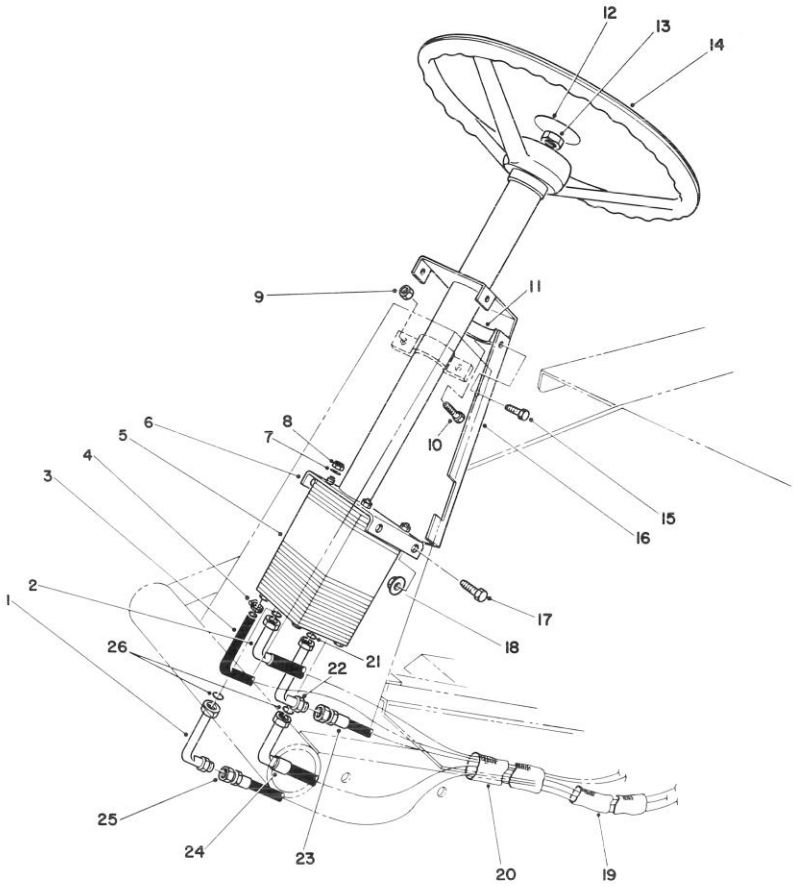


BRAKE PEDAL ASSEMBLY

Ref. No.	Part No.	Description	No. Used
1	7-3900	Pad — Brake	1
2	27-7580	Pad — Right Turn	1
3	3218-5	Jam Nut	2
4	21-2850	Mount — R.H. Pedal	1
5	11-0590	Hex Hd. Self Tapping Screw	2
6	256-156	Bushing	5
7	3272-5	Cotter Pin	3
8	3256-22	Washer — Flat	1
9	3-3251	Spring — Compression	1
10	27-7660	Rod — Brake Latch	1
11	233-17	Knob	1
12	66-6190	Decal — Parking Brake	1
13	3-7243	Spring — Extension	2
14	283-58	Clevis Pin	2
15	21-3380	Cable — L.H. Brake	1
*	21-3370	Cable — R.H. Brake	1
16	23-2270	Bushing — Rubber	1
17	23-2240	Rod — Pump Control	1
18	28-5190	Pedal — Traction	1
19	28-5130	Pad — Pedal	1
20	28-5240	Pin — Traction Pedal	1
21	3272-6	Cotter Pin	7
22	28-5210	Shaft — Traction Pedal	1
23	28-5160	Bracket — Pivot (Incl. Ref. #6)	1

Ref. No.	Part No.	Description	No. Used
24	32121-16	Roll Pin	1
25	28-5220	Wheel — Friction	1
26	21-0140	Socket Assembly — R.H.	1
27	3220-5	Jam Nut	1
28	3217-7	Hex Nut	2
29	3253-21	Lockwasher	4
30	32153-2	Locknut	2
31	3231-21	Carriage Bolt	2
32	323-13	Hex Hd. Capscrew	2
33	3274-47	Hex Socket Flat Hd. Capscrew	1
34	27-7590	Mount — Brake	1
35	27-9270	Mount — Brake Pivot Shaft	1
36	27-7640	Shaft — Brake Latch	1
37	32149-2	Nut	1
38	27-7570	Pad — Left Turn	1
39	3234-11	Capscrew	3
40	3256-26	Washer — Flat	1
41	27-7490	Pedal — L.H. Brake (Incl. Ref. #43)	1
42	27-7510	Pedal — R.H. Brake (Incl. Ref. #43)	1
43	256-10	Bushing	4
44	302-5	Fitting — Grease	2
45	27-8550	Pedal — Parking Bake	1

*Not Illustrated

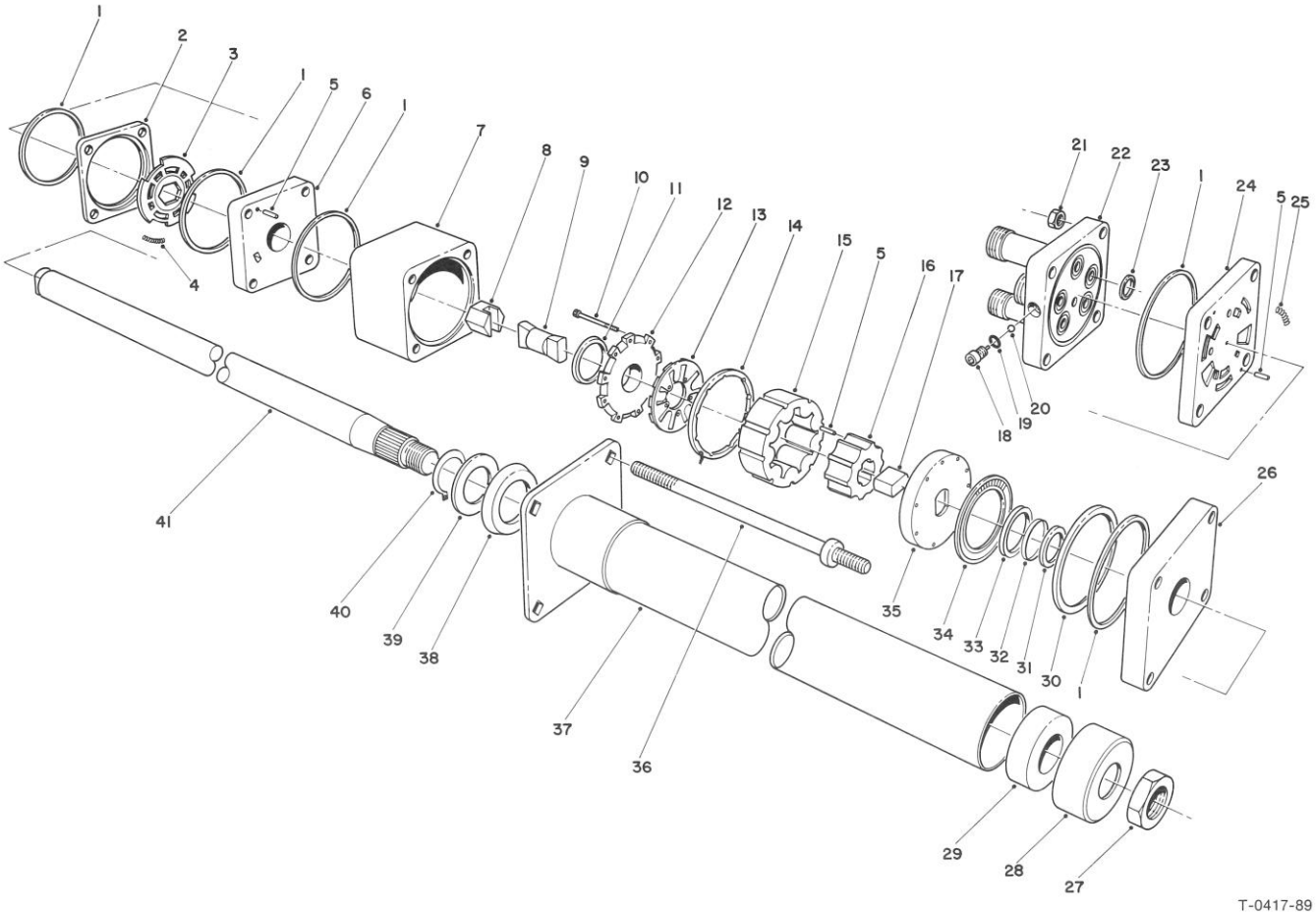


T-0416-89

POWER STEERING ASSEMBLY

Ref. No.	Part No.	Description	No. Used
1	66-1740	90° Elbow	1
2	63-8980	Hose — Aux/Valve	1
3		Hose	1
4	2412-36	Clamp	2
5	63-9250	Valve — Power Steering	1
6	63-8870	Bracket - Column Mount	1
7	3256-3	Washer	4
8	3296-4	Locknut	4
9	3296-29	Locknut	2
10	322-5	Hex Hd. Capscrew	2
11	66-8890	Clamp Half	1
12	24-2090	Cap — Steering Wheel	1
13	66-9760	Hex Nut	1

Ref. No.	Part No.	Description	No. Used
14	24-2000	Wheel — Steering	1
15	32144-10	Hex Hd. Thr'd Form Screw	6
16	66-1680	Cover — Tower	1
17	323-6	Hex Hd. Capscrew	4
18	3290-357	Hex Flange Nut	4
19	70-1390	Sleeve — Protective	1
20	70-1380	Sleeve — Protective	1
21	237-30	O-Ring	2
22	66-1730	90° Elbow	1
23	63-8970	Hose — Trans/Str.	1
24	68-9730	Hose — Str./Cyl.	1
25	68-9720	Hose — Cyl./Str.	1
26	237-22	O-Ring	2



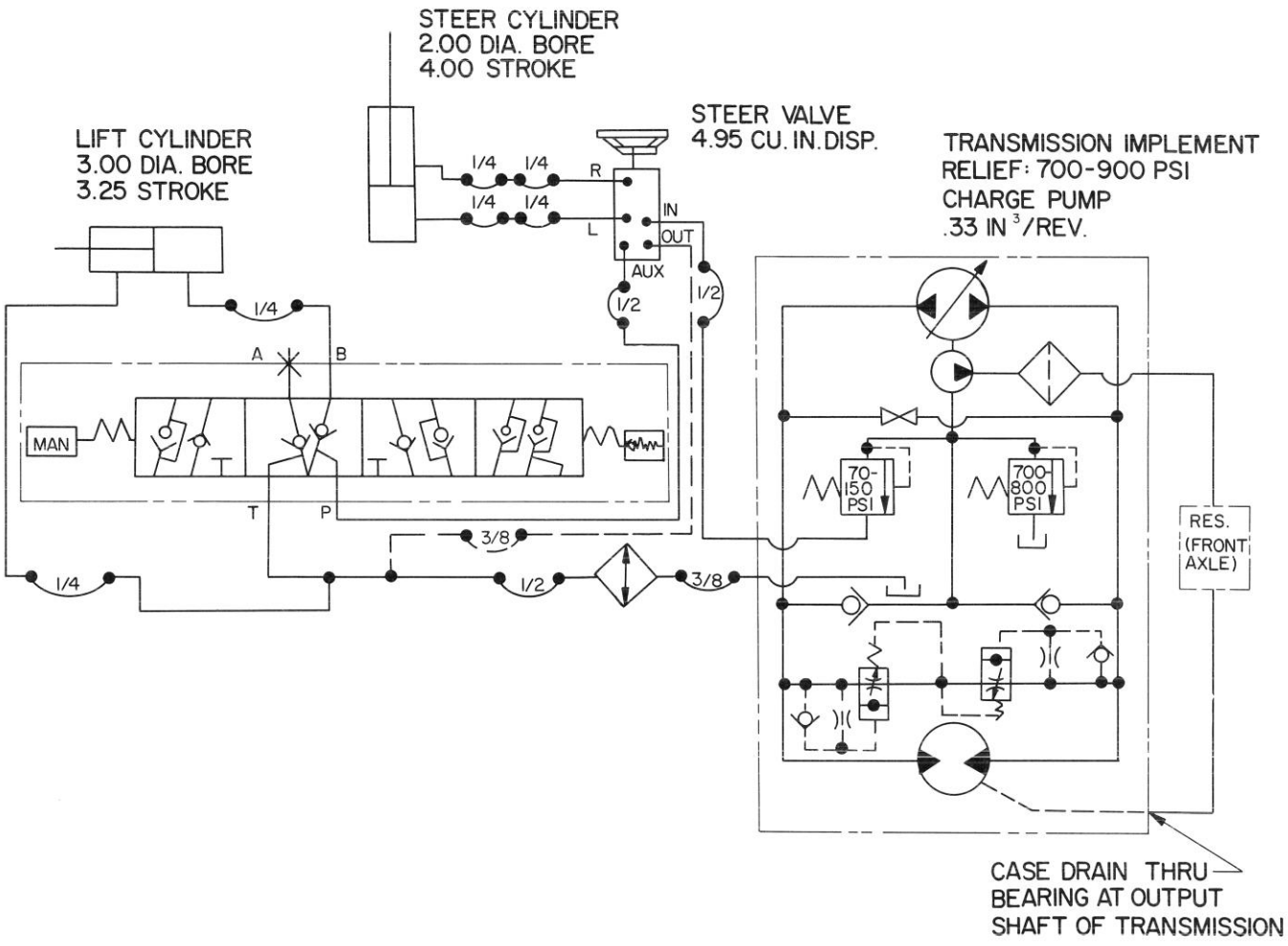
POWER STEERING VALVE ASSEMBLY NO. 63-9250

Ref. No.	Part No.	Description	No. Used
1		Ring — Seal	5
2		Ring — Valve	1
3		Plate — Valve	1
4		Spring	3
5		Pin — Alignment	9
6		Manifold — Isolation	1
7		Ring — Metering	1
8		Hex Drive Assy.	1
9		Link — Drive	1
10		Hex Socket Hd. Screw	11
11		Seal — Commutator	1
12		Cover — Commutator	1
13		Commutator	1
14		Ring — Commutator	1
15		Stator	1
16		Rotor	1
17		Spacer — Drive Link	1
18		Plug	1
19		O-Ring	1
20		Ball	1
21		Hex Nut	4
22		Cover — Port	1
23		O-Ring	5
24		Manifold — Port	1
25		Spring	3
26		Plate — Upper Cover	1
27	3220-6	Nut	1
28	66-9770	Seal	1

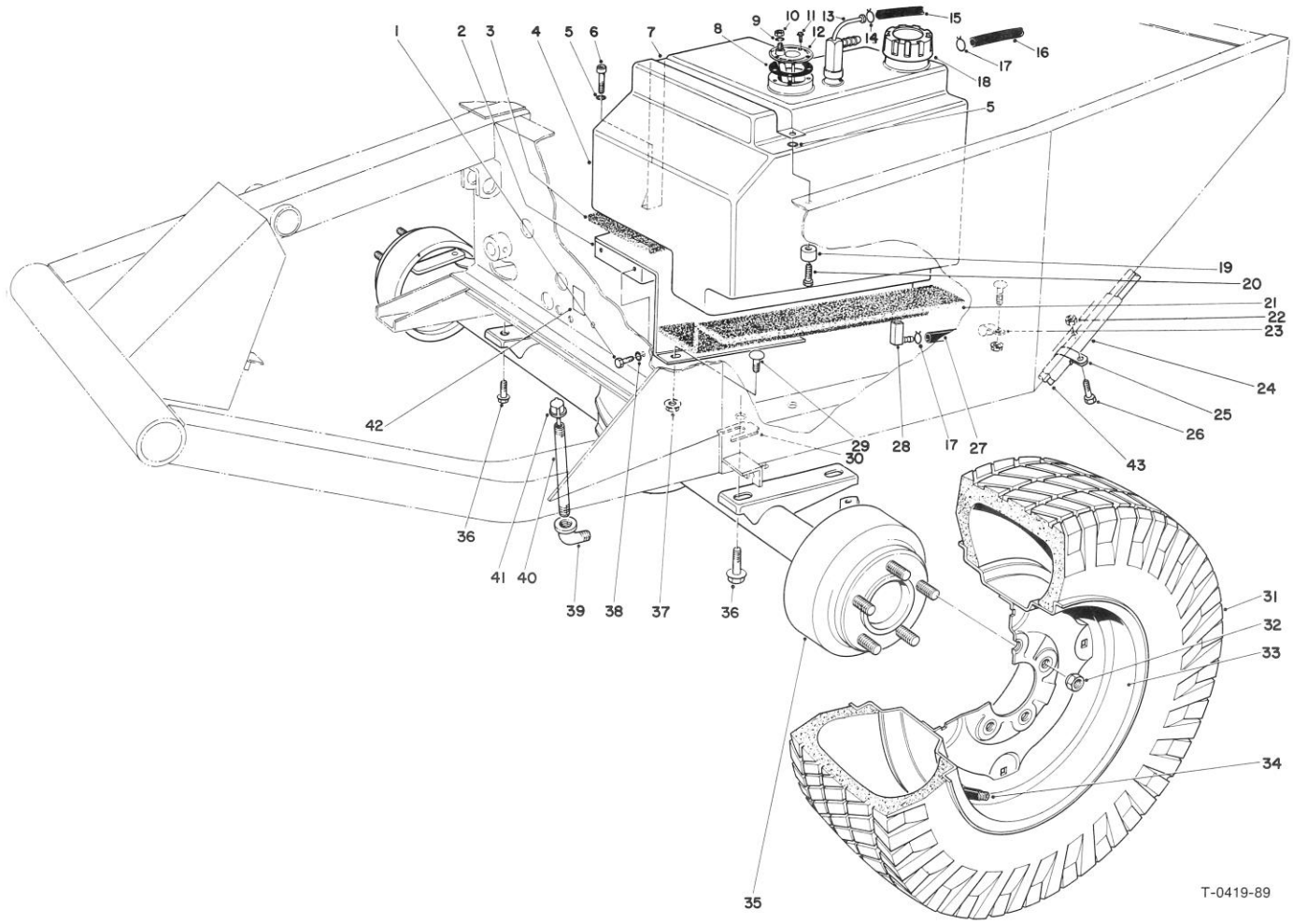
Ref. No.	Part No.	Description	No. Used
29	66-9780	Bushing	1
30		Spacer — Thrust Bearing	1
31		Spacer — Seal	1
32		Ring — Back Up	1
33		Seal — Face	1
34		Bearing — Thrust	1
35		Plate — Drive	1
36	66-9850	Bolt — Special	4
37	66-9860	Upper Cover & Jacket	1
38	66-9870	Plate — Retaining	1
39	66-9880	Washer — Retaining Plate	1
40	66-9890	Ring — Retaining	1
41	66-9900	Shaft — Input	1
*	66-9970	Spring Kit	1
*	66-9980	Seal Kit	1
*	66-9990	Needle Roller Kit	1

*Not Illustrated

HYDRAULIC SCHEMATIC



T-0418-89

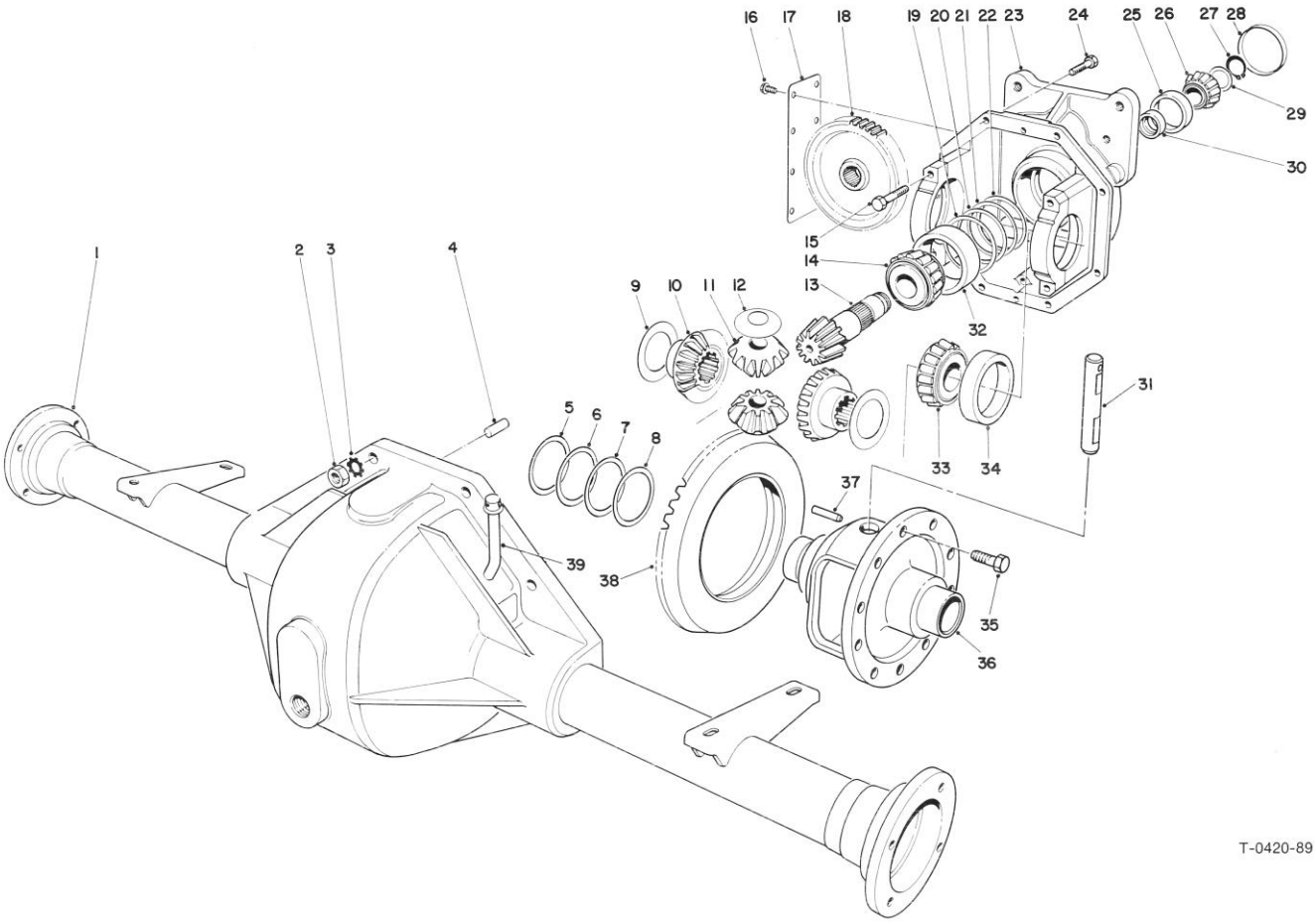


FRONT AXLE & FUEL TANK ASSEMBLY

Ref. No.	Part No.	Description	No. Used
1	32104-6	Self Tapping Screw	2
2	68-9760	Fuel Tank Base	1
3	21-3600	Foam — Tank Support	1
4	43-4150	Fuel Tank (Incl. Ref. #13 & 14)	1
5	3253-3	Lockwasher	2
6	32104-96	Capscrew Hex. Hd.	1
7	37-9550	Strap — Fuel Tank	1
8	62-7650	Gasket	1
9	3253-17	Lockwasher	1
10	3219-14	Nut	1
11	32144-53	Screw — Thread Forming	5
12	62-6840	Sender Fuel Level	1
13	43-4160	Fitting Return & Vent	1
14	2412-79	Clamp	1
15	43-4230	Hose Return	1
16	43-5690	Hose — Vent Fuel Tank	1
17	2412-6	Clamp	2
18	55-3572	Fuel Cap	1
19	22-7810	Spacer	1
20	321-6	Capscrew	1
21	21-3610	Foam — Tank Support	1
22	3296-20	Locknut	2

Ref. No.	Part No.	Description	No. Used
23	2412-41	Clamp	1
24	56-7980	Sleeve — Protective	1
25	2412-39	R-Clamp	2
26	322-3	Hex. Hd. Capscrew	2
27	63-9640	Hose Fuel	1
28	43-4190	Fitting Assembly	1
29	3230-2	Carriage Bolt	3
30	42-6080	Shim — Axle	A/R
31	231-101	Tire	2
32	23-7270	Wheel Nut	10
33	217-117	Rim	2
34	232-31	Valve Stem w/Cap	2
35	43-7630	Differential Assembly	1
36	32144-67	Capscrew — Thread Forming	4
37	32128-20	Flange Nut	3
38	3253-21	Lockwasher	2
39	2811-9	Street Elbow	1
40	289-37	Pipe Nipple	1
41	23-5180	Dipstick	1
42	53-4430	Decal Oil	1
43	68-9710	Hose — Steering Cylinder	2
*	231-90	Tube, Inner	2

*Not Illustrated

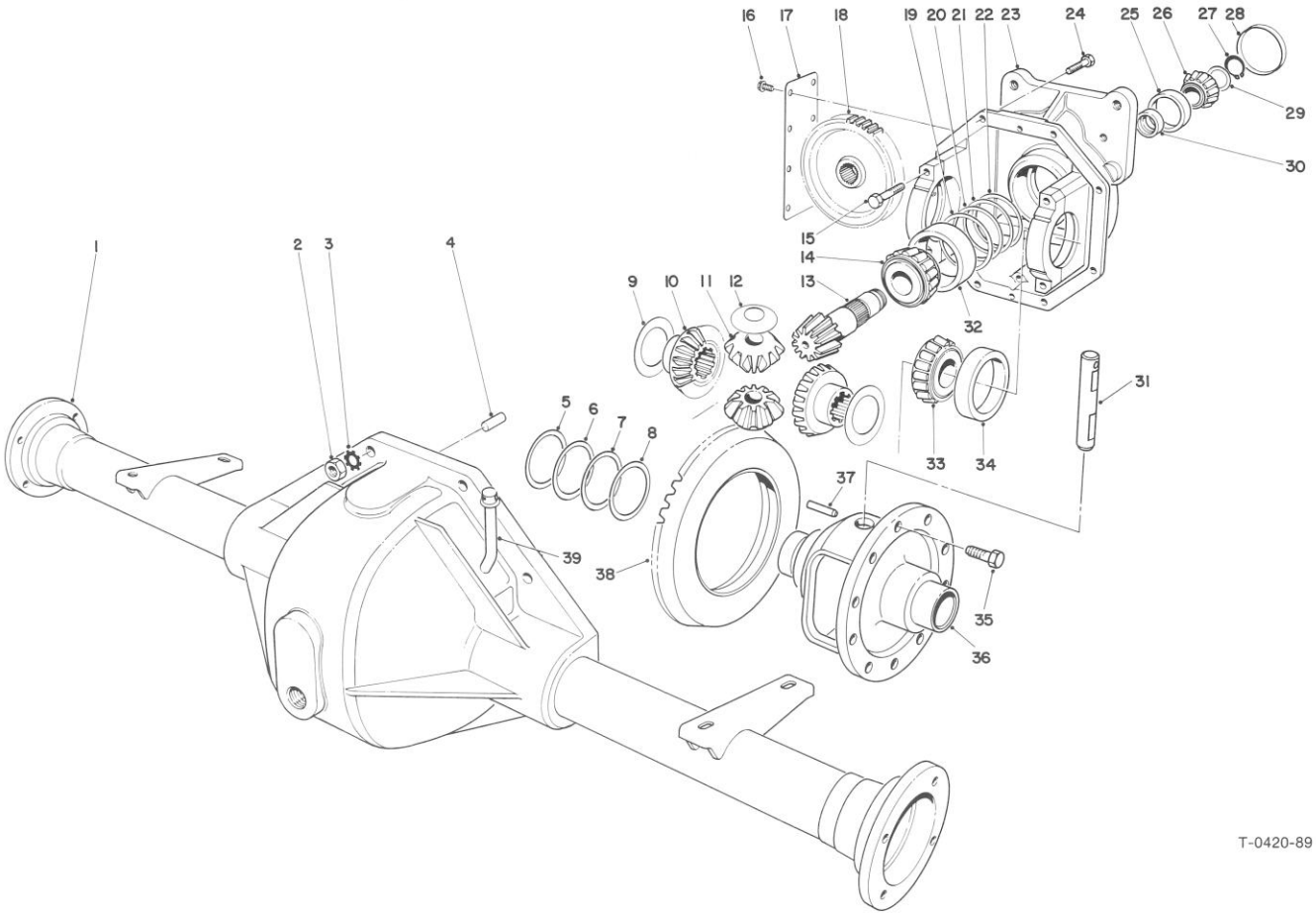


DIFFERENTIAL ASSEMBLY NO. 67-8220

Ref. No.	Part No.	Description	No. Used
1	43-6840	Lower Housing	1
2	3219-2	Nut	8
3	3255-8	Lockwasher	8
4	21-8270	Dowel Pin	2
5	21-8090	Differential Adjust. Shim .003	A/R
6	21-8100	Differential Adjust. Shim .005	A/R
7	21-8110	Differential Adjust. Shim .010	A/R
8	21-8120	Differential Adjust. Shim .030	A/R
9	21-7720	Thrust Washer	2
10	24-8790	Differential Bevel Gear Side	2
11	21-7690	Pinion Gear	2
12	21-7730	Thrust Washer	2
13		Drive Pinion (Incl. Ref. #38)	1
14	43-6760	Tapered Roller Bearing Cone	1
15	324-23	Capscrew	4
16	12-5450	Thread Forming Screw	8
17	21-7830	Gear Cover	1
18	21-8150	Spur — Gear	1
19	43-6710	Differential—Adjust. Shim .003	A/R
20	43-6711	Differential—Adjust. Shim .005	A/R
21	43-6712	Differential—Adjust. Shim .010	A/R
22	43-6713	Differential—Adjust. Shim .030	A/R
23	68-9770	Upper Housing (Incl. Ref. #14)	1

Ref. No.	Part No.	Description	No. Used
24	3210-7	Capscrew	8
25	254-90	Bearing Cup	1
26	254-91	Bearing Cone	1
27	43-6550	Snap Ring	1
28	21-7850	Cup Plug	1
29	46-2210	Shim Front Pinion Bearing .031	A/R
*	46-2211	Shim Front Pinion Bearing .033	A/R
*	46-2212	Shim Front Pinion Bearing .035	A/R
*	46-2213	Shim Front Pinion Bearing .037	A/R
*	46-2214	Shim Front Pinion Bearing .039	A/R
*	46-2215	Shim Front Pinion Bearing .041	A/R
*	46-2216	Shim Front Pinion Bearing .043	A/R
*	46-2220	Shim Front Pinion Bearing .045	A/R
*	46-2221	Shim Front Pinion Bearing .047	A/R
*	46-2222	Shim Front Pinion Bearing .049	A/R
*	46-2223	Shim Front Pinion Bearing .051	A/R
*	46-2224	Shim Front Pinion Bearing .053	A/R
*	46-2225	Shim Front Pinion Bearing .055	A/R
*	46-2226	Shim Front Pinion Bearing .057	A/R
30	21-8020	Front Pinion Bearing — Spacer	1
31	21-7700	Pinion Mate Shaft	1
32	43-6750	Tapered Roller Bearing Cup	1
33	254-65	Cone — Tapered Bearing	2

*Not Illustrated

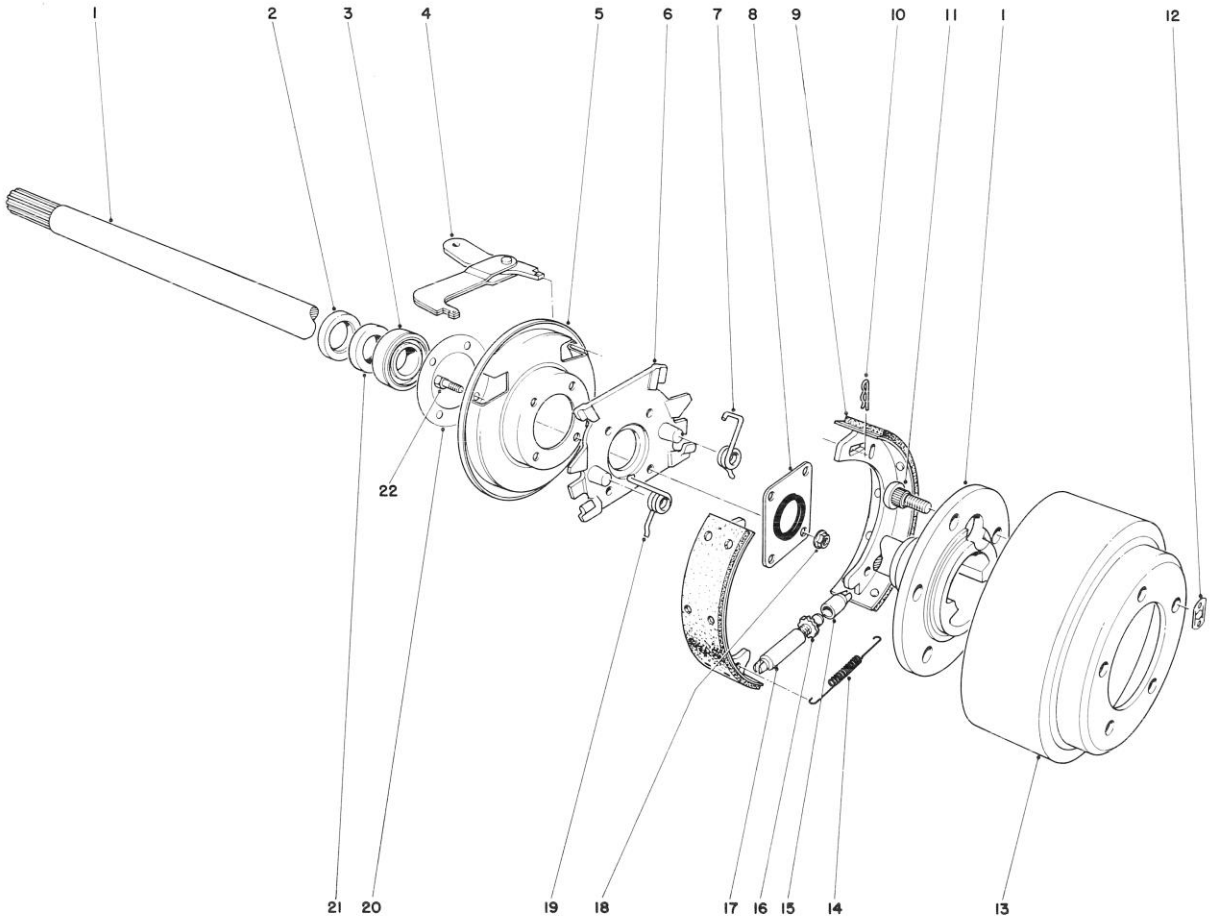


DIFFERENTIAL ASSEMBLY NO. 67-8220 (Continued)

Ref. No.	Part No.	Description	No. Used
34	254-66	Cup — Tapered Bearing	2
35	21-7770	Drive Gear Screw	5
36	21-7670	Differential Case	1
37	32121-15	Roll Pin	1

Ref. No.	Part No.	Description	No. Used
38		Ring Gear	1
39	21-8230	Vent Tube Assembly	1
*	43-6510	Gear & Pinion Assembly (Incl. Ref. #13 & 38)	1

*Not Illustrated

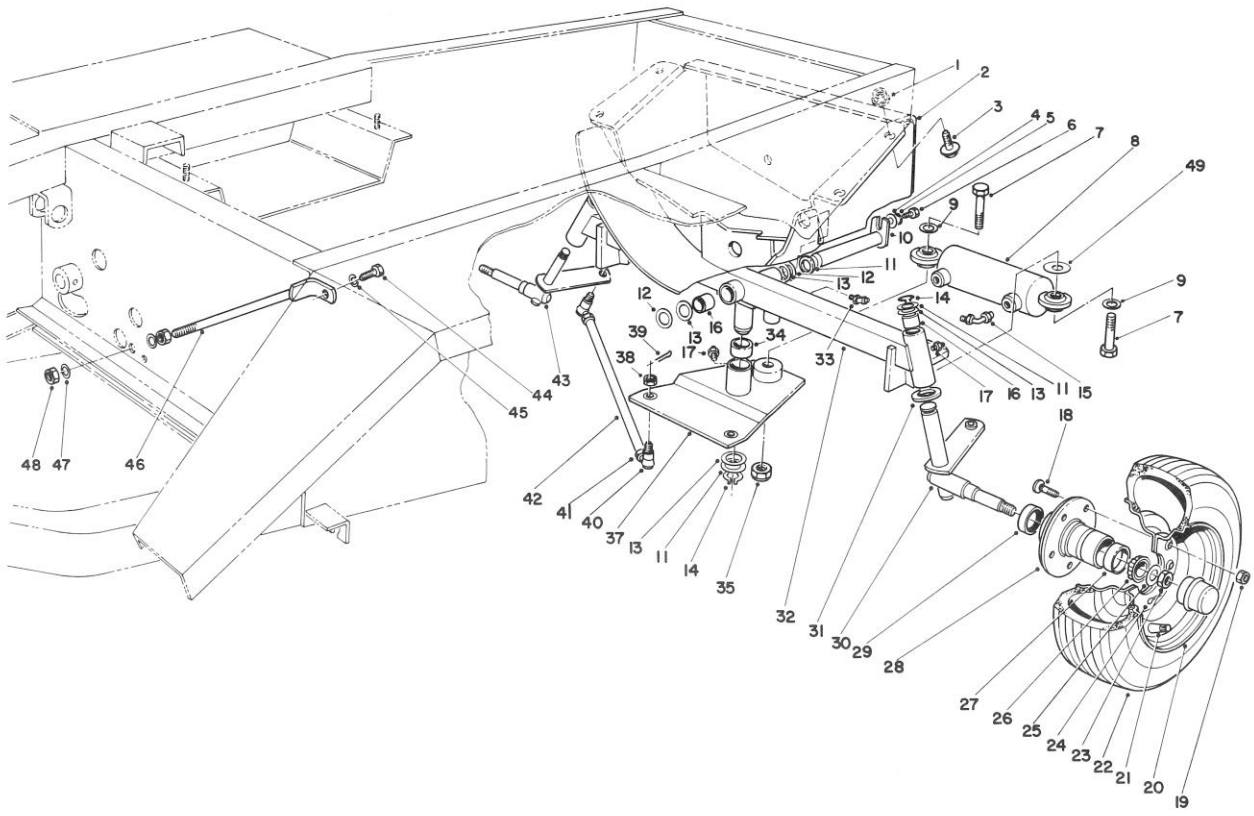


T-0421-89

BRAKE ASSEMBLY

Ref. No.	Part No.	Description	No. Used
1	28-0650	Flanged Axle Shaft	2
2	21-8330	Oil Seal	2
3	21-8180	Bearing	2
4	24-9180	Strut & Lever Parking Brake	2
5	21-9450	Dust Shield	2
6	43-6810	Torque – Spider	2
7	21-9430	Spring – Shoe Return R.H.	2
8	28-0670	Oil Seal	2
9	43-2690	Shoe & Lining Assembly	4
10	21-9460	Retainer – Parking Brake Lever	4
11	242-34	Axle Flange Stud	10

Ref. No.	Part No.	Description	No. Used
12	21-8360	Clip – Retaining	2
13	28-0680	Brake Drum	2
14	21-9440	Spring – Adjusting Screw	2
15	21-9390	Socket – Adjusting Screw	2
16	21-9370	Adjusting Screw	2
17	21-9380	Pivot Nut	2
18	43-6800	Locknut	8
19	21-9420	Spring – Shoe Return L.H.	2
20	21-8320	Gasket – Wheel Bearing	2
21	24-8840	Ring – Wheel Bearing	2
22	28-0660	Capscrew	8



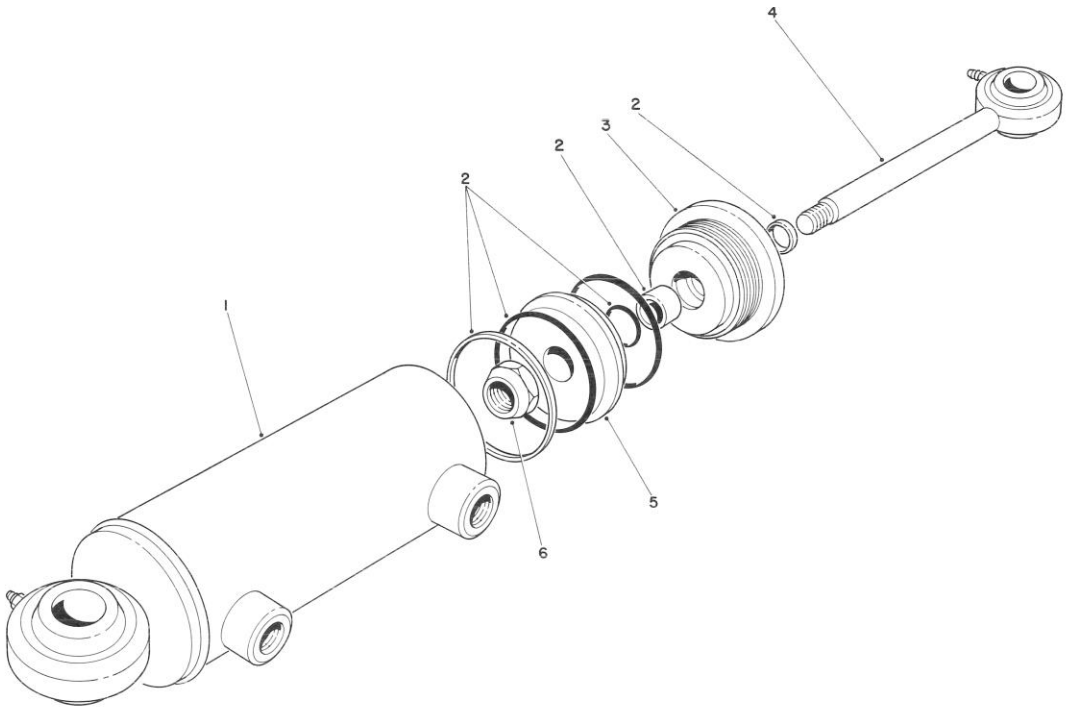
T-0422-89

REAR AXLE & WHEEL ASSEMBLY

Ref. No.	Part No.	Description	No. Used
1	32128-23	Flange Locknut	4
2	43-3440	Support — Axle	1
3	3434-6	Flange Hex Hd. Capscrew	4
4	3256-23	Washer — Flat	1
5	3253-4	Lockwasher	1
6	322-3	Hex Hd. Capscrew	1
7	328-25	Hex Hd. Capscrew	2
8	63-9240	Cylinder — Hydraulic	1
9	67-9410	Washer	2
10	43-3480	Pin — Rear Axle	1
11	5-1226	Washer	A/R
12	56-2460	Washer	A/R
13	10-8110	Washer — Thrust	10
14	32151-36	Ring — Retaining	3
15	340-54	Fitting — 45°	2
16	67-1750	Bushing	6
17	302-5	Fitting — Grease	3
18	10-6830	Stud — Drive	10
19	242-50	Nut — Wheel	10
20	217-106	Wheel	2
21	232-31	Valve Stem w/Cap	2
22	231-105	Tire	2
23	32136-5	Nut — Slotted	2
24	3272-13	Pin — Cotter	2
25	3256-28	Washer	2
26	254-94	Cone — Bearing	4
27	254-72	Cup — Bearing	4

Ref. No.	Part No.	Description	No. Used
28	21-2820	Hub — Wheel (Incl. Ref. #18 & 27)	2
29	253-129	Closure	2
30	63-9170	Spindle Assembly L.H.	1
31	256-121	Bushing — Thrust	2
32	68-8480	Axle — Rear (Incl. Ref. #16)	1
33	302-11	Fitting — Grease	1
34	256-242	Bushing	2
35	32128-45	Locknut	2
37	63-9220	Steer Pivot — Rear (Incl. Ref. #34)	4
38	32136-4	Nut — Slotted	4
39	3272-6	Pin — Cotter	4
40	21-0140	Socket Assembly R.H. Thread (Incl. Ref. #38)	2
*	21-0150	Socket Assembly L.H. Thread (Incl. Ref. #38)	2
41	3220-5	Jam Nut R.H. Thread	2
*	3220-12	Jam Nut L.H. Thread	2
42	21-2000	Tie Rod Assembly	2
43	63-9180	Spindle Assembly R.H.	1
44	323-3	Hex Hd. Capscrew	1
45	3253-21	Lockwasher	1
46	24-9830	Support — Axle	1
47	3256-6	Washer — Flat	2
48	3217-9	Nut	2
49	67-7250	Spacer — Ring	1

*Not Illustrated

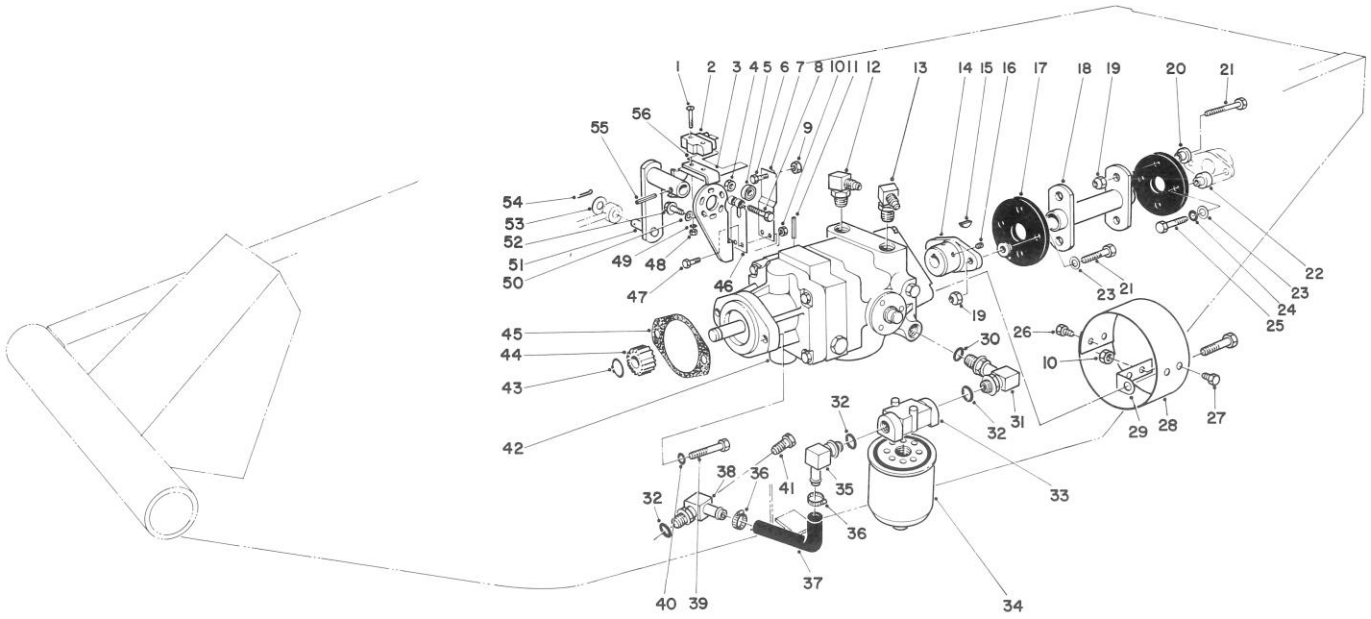


T-0423-89

HYDRAULIC STEERING CYLINDER ASSEMBLY NO. 63-9240

Ref. No.	Part No.	Description	No. Used
1		Tube Assembly	1
2	66-1960	Seal Kit	1
3	66-1950	Gland	1

Ref. No.	Part No.	Description	No. Used
4	66-1910	Piston Rod Assembly	1
5	66-1940	Piston	1
6	66-1930	Locknut	1

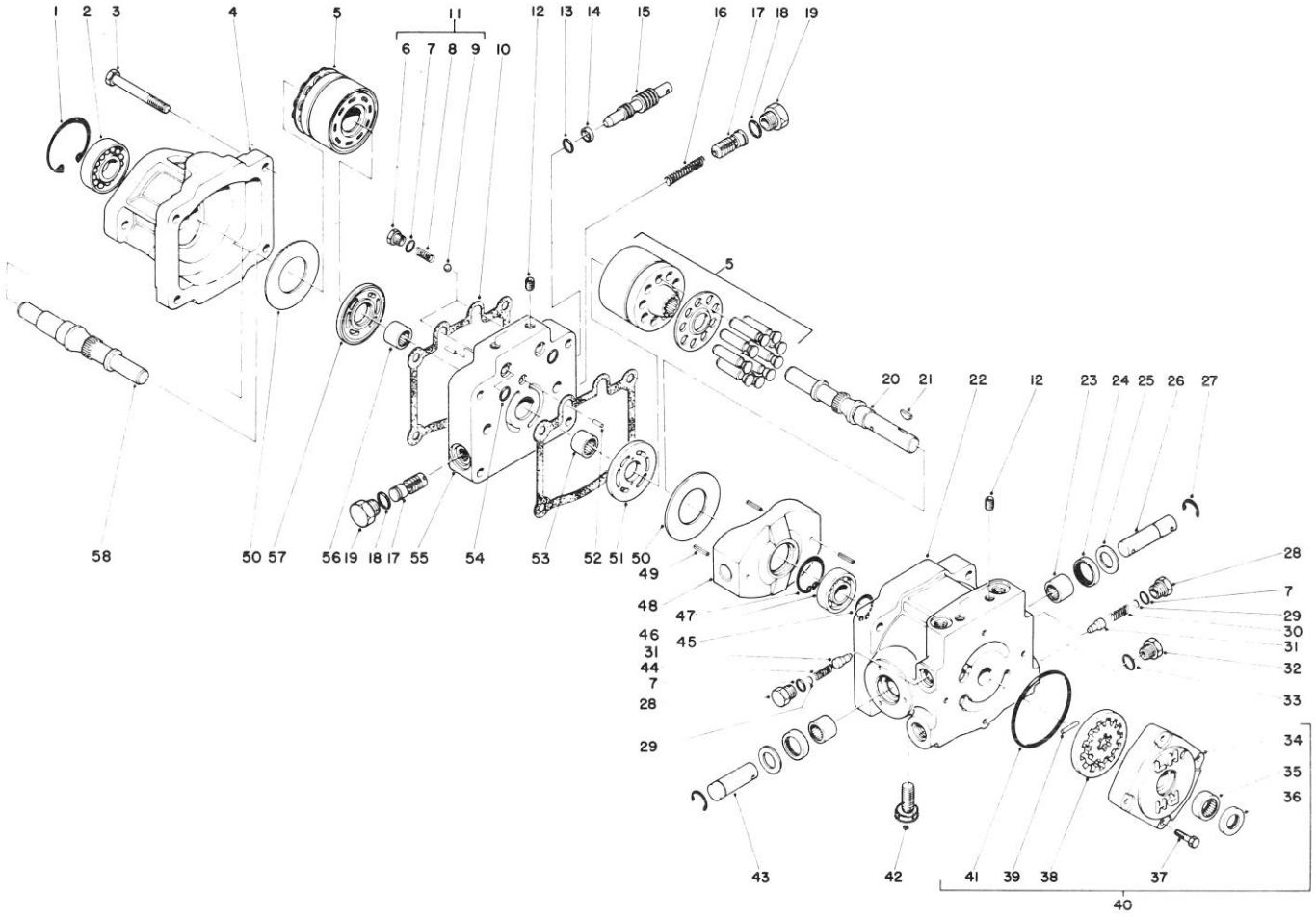


T-0424-89

HYDROSTATIC TRANSMISSION

Ref. No.	Part No.	Description	No. Used
1	3249-11	Round Hd. Machine Screw	2
2	29-6160	Micro Switch	1
3	29-6120	Pump Plate	1
4	3296-29	Locknut	1
5	251-259	Ball Bearing	1
6	3210-7	Capscrew	1
7	29-6170	Extended Leaf Spring	1
8	322-17	Capscrew	1
9	3219-2	Hex Nut	1
10	3296-42	Locknut	6
11	32121-6	Roll Pin	1
12	340-77	Elbow	1
13	340-99	Elbow	1
14	33-4380	Pump Hub	1
15	3257-32	Woodruff Key	1
16	3241-5	Square Hd. Set Screw	2
17	44-2230	Rubber Coupling	2
18	46-6390	Drive Coupling	1
19	32152-1	Locknut	8
20	27-6600	Spacer Rubber Coupling	6
21	322-6	Capscrew	6
22	27-6590	Spacer Rubber Coupling	2
23	3256-3	Washer	4
24	3253-4	Lockwasher	2
25	322-8	Capscrew	2
26	321-2	Capscrew	2
27	321-4	Hex Hd. Capscrew	2
28	54-9300	Cover	1

Ref. No.	Part No.	Description	No. Used
29	54-9290	Bracket	2
30	237-80	O-Ring	1
31	68-8660	Elbow	1
32	237-81	O-Ring	3
33	68-8990	Head — Filter	1
34	67-8110	Oil Filter	1
35	353-987	Elbow	1
36	2412-34	Clamp — Hose	2
37	68-9650	Hose — Axle	1
38	70-2620	Elbow — 90°	1
39	323-7	Capscrew	2
40	3253-21	Lockwasher	2
41	353-508	Plug — Drain	1
42	67-8710	Transmission — Inline	1
43	32120-72	Ring — Retaining External	1
44	23-4810	Gear Transmission Output	1
45	41-8760	Gasket Transmission	1
46	29-6150	Leaf Spring	1
47	321-4	Hex Hd. Capscrew	2
48	3217-16	Nut	2
49	3254-9	Lockwasher	2
50	3255-7	Washer — Lock	3
51	28-9570	Pump Lever	1
52	11-9760	Self Tapping Screw	3
53	3256-6	Washer	1
54	3272-10	Cotter Pin	1
55	32121-24	Roll Pin	1
56	46-8810	Stop — Leaf Spring	1

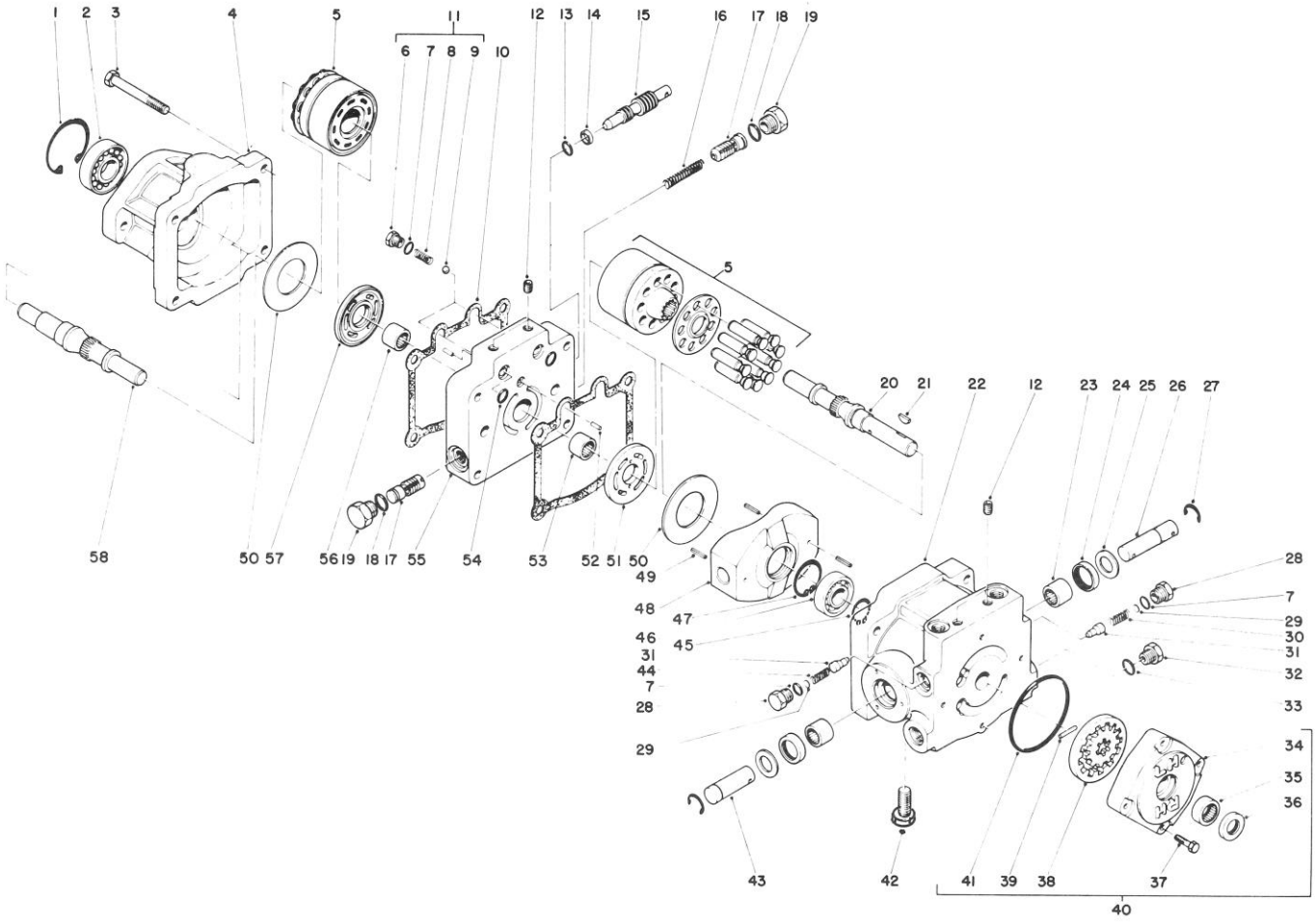


T-0425-89

TRANSMISSION ASSEMBLY (67-8710)

Ref. No.	Part No.	Description	No. Used
1	32120-8	Retaining Ring	1
2	251-263	Ball Bearing	1
3	323-13	Capscrew	4
4	67-9080	Motor Housing	1
5	48-1800	Cylinder Block Kit	2
6	25-2650	Check Valve Plug	2
7	237-86	O-Ring	4
8	25-2640	Valve Spring	2
9	25-2490	Ball	2
10	67-9100	Gasket	2
11	25-3180	Check Valve Kit	
		(Incl. Ref. #6-9)	2
12	285-17	Pipe Plug	6
13	237-22	O-Ring	1
14	25-2630	Back Up Ring	1
15	25-2620	By Pass Valve	1
16	25-2610	Accel. Valve Spring	1

Ref. No.	Part No.	Description	No. Used
17	25-2410	Accel. Valve Assembly	2
18	237-79	O-Ring	2
19	353-550	Hex. Hd. Plug	2
20	36-5370	Pump Shaft	1
21	3257-32	Woodruff Key	1
22	25-2520	Pump Housing	1
23	252-82	Needle Bearing	2
24	25-3210	Lip Seal	2
25	25-2510	Flat Washer	2
26	25-2580	Trunnion Shaft	1
27	32151-46	Retaining Ring	2
28	25-2460	Hex. Hd. Plug	2
29	25-2470	Shim Pack	2
30	25-2570	Valve Spring	1
31	25-2560	Relief Valve Cone	2
32	353-551	Hex. Hd. Plug	1
33	237-80	O-Ring	1

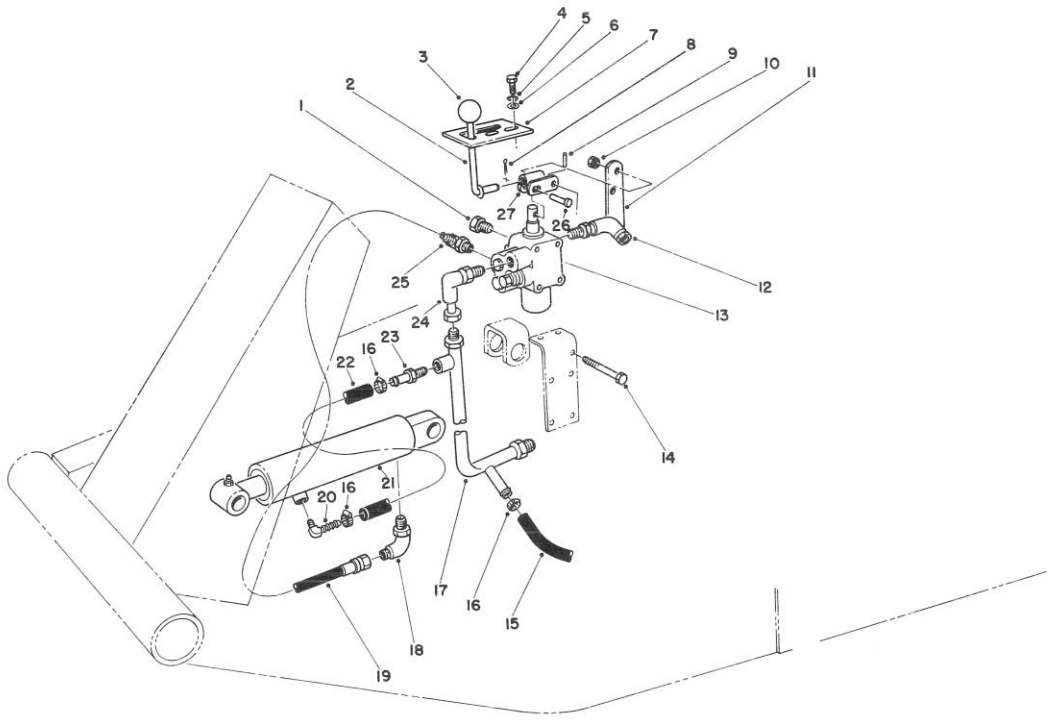


T-0425-89

TRANSMISSION ASSEMBLY (67-8710) (Continued)

Ref. No.	Part No.	Description	No. Used
34	25-2550	Charge Pump Housing	1
35	252-87	Needle Bearing	1
36	253-44	Lip Seal	1
37	322-4	Hex. Hd. Capscrew	4
38	25-2680	Gerotor Assembly	1
39	25-2530	Headless Straight Pin	1
40	25-3190	Charge Pump	
		(Incl. Ref. #34-39 & 41)	1
41	237-95	O-Ring	1
42	67-9090	Filter Union	1
43	25-2500	Trunnion Shaft	1
44	25-2480	Valve Spring	1
45	32120-15	Retaining Ring	1

Ref. No.	Part No.	Description	No. Used
46	251-8	Ball Bearing	1
47	32120-11	Retaining Ring	1
48	25-2450	Variable Swashplate	1
49	32121-91	Coil Spring Pin	3
50	25-2380	Thrust Plate	2
51	25-2440	Pump Valve Plate	1
52	25-2430	Dowel Pin	2
53	25-3300	Needle Bearing	1
54	62-4290	O-Ring	2
55	25-2420	Center Section	1
56	46-8400	Needle Bearing	1
57	25-2390	Motor Valve Plate	1
58	46-8410	Motor Shaft	1

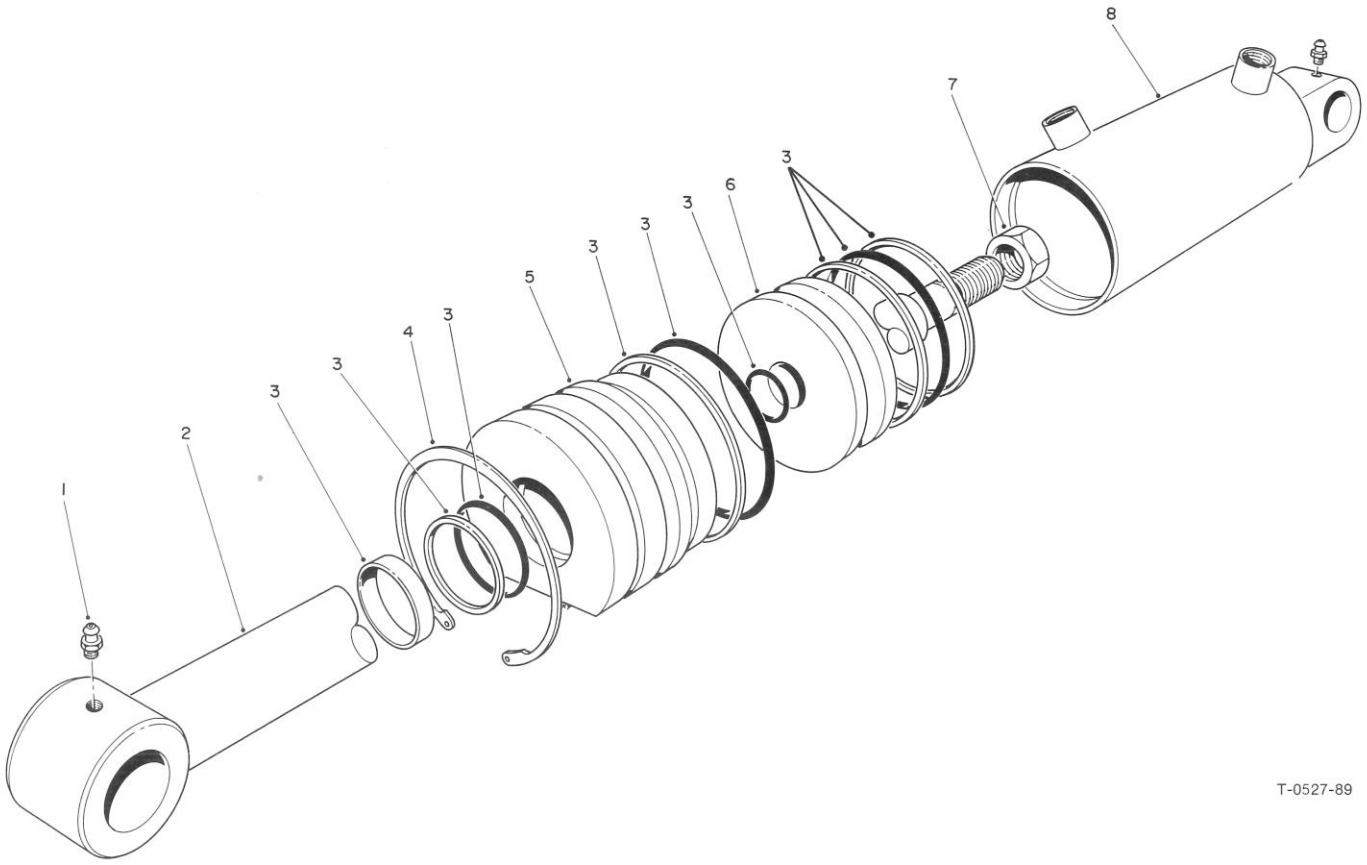


T-0426-89

VALVE & CYLINDER ASSEMBLY

Ref. No.	Part No.	Description	No. Used
1	353-512	Plug	1
2	21-8620	Lever — Valve	1
3	233-21	Knob	1
4	321-4	Hex Hd. Capscrew	2
5	3253-3	Lockwasher	2
6	3256-22	Washer	2
7	21-8640	Latch — Valve Lever	1
8	3272-6	Cotter Pin	1
9	32121-73	Pin — Slotted Spring	1
10	3296-42	Locknut	5
11	21-9010	Pivot Mount — Valve Lever	1
12	340-99	Fitting — 90° Elbow	1
13	43-1710	Valve Assembly	1
14	321-23	Hex Hd. Capscrew	5

Ref. No.	Part No.	Description	No. Used
15	63-8990	Hose	1
16	2412-36	Clamp — Hose	3
17	63-9260	Manifold — Valve	1
18	340-112	Elbow — 90°	1
19	66-5280	Hose — Valve to Cylinder	1
20	304-75	Fitting — 90° Barb	1
21	66-1250	Cylinder — Hydraulic	1
22	65-2970	Line — Gas	1
23	304-73	Fitting — Straight Barb	1
24	340-110	Elbow — 90°	1
25	340-97	Fitting — 90°	1
26	283-17	Pin	1
27	21-8590	Link — Valve Lever	1



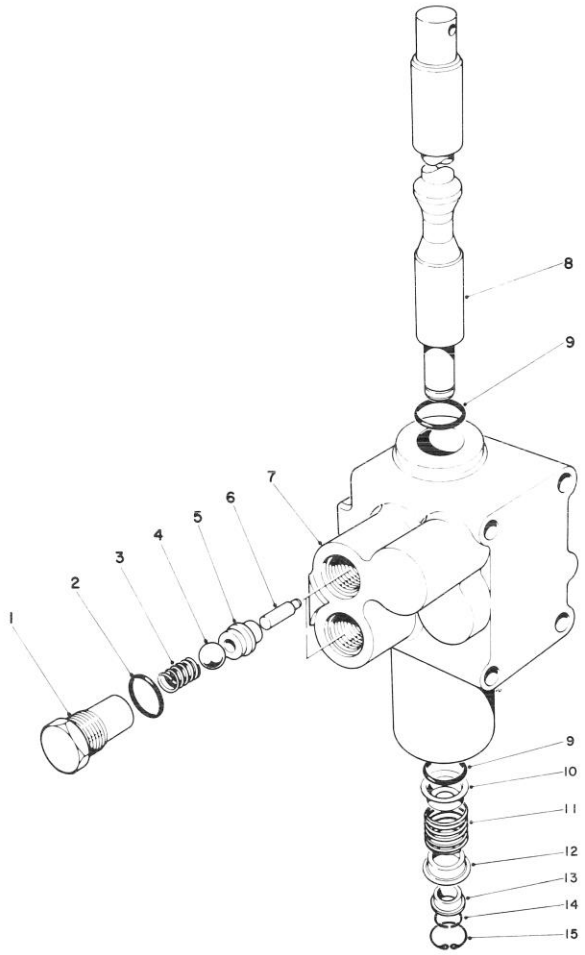
T-0527-89

HYDRAULIC LIFT CYLINDER NO. 66-1250

Ref. No.	Part No.	Description	No. Used
1	302-55	Grease Fitting	2
2	67-5480	Shaft	1
3	67-5500	Repair Kit	1
4	67-5470	Ring — Retaining	1

Ref. No.	Part No.	Description	No. Used
5	67-5460	Head	1
6	67-5450	Piston	1
7	60-9760	Hex Nut	1
8		Barrel	1

*Not Illustrated

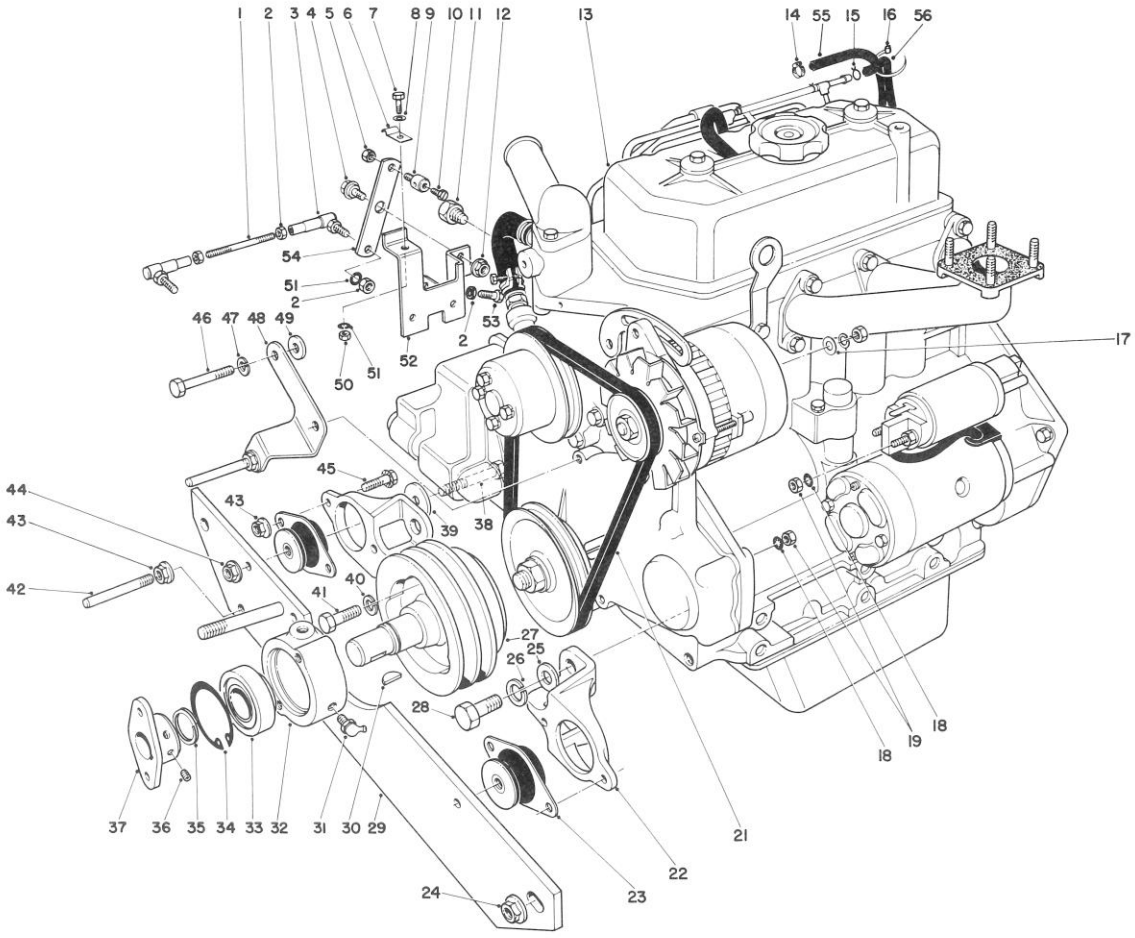


T-0428-89

CONTROL VALVE ASSEMBLY NO. 43-1710

Ref. No.	Part No.	Description	No. Used
1	22-8330	Plug	2
2	237-42	O-Ring	2
3	22-8340	Spring	2
4	22-8350	Ball	2
5	22-8370	Seat – Check Valve	2
6	22-8360	Pin – Cam	2
7	43-1730	Body	1
8	22-8420	Spool	1

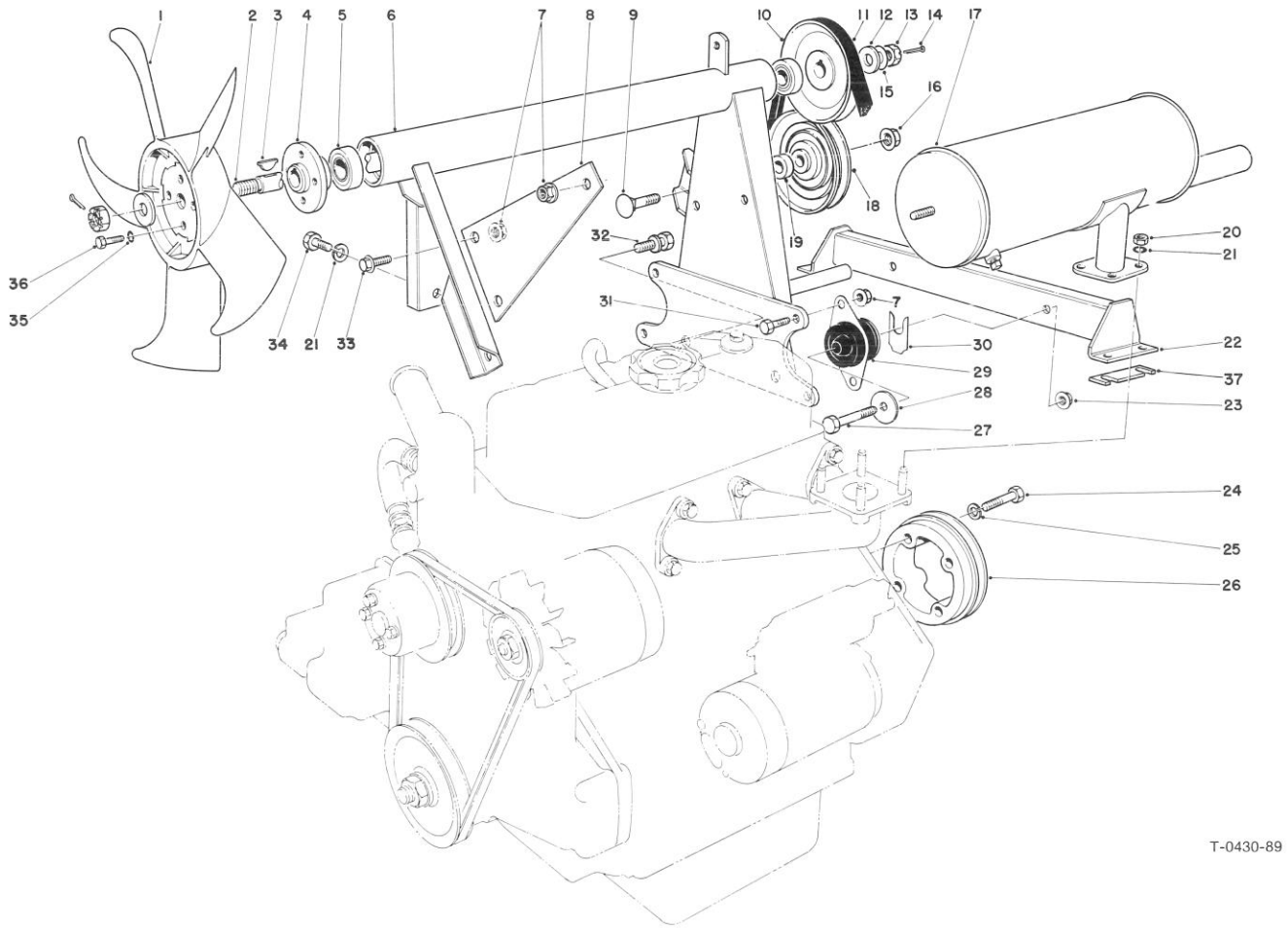
Ref. No.	Part No.	Description	No. Used
9	22-8500	O-Ring	2
10	22-8380	Spring Retainer	1
11	22-8410	Spring	1
12	22-8390	Spring Retainer	1
13	22-8400	Spacer Float	1
14	22-8480	Spring Ring Spool	1
15	22-8490	Snap Ring	1



ENGINE ASSEMBLY

Ref. No.	Part No.	Description	No. Used
1	43-3770	Link — Throttle	1
2	3219-1	Nut	5
3	18-1720	Ball Joint Assembly	2
4	37-8770	Shoulder Bolt	1
5	3296-20	Nut-Lock, Nylon Insert	1
6	2412-31	Clamp — Bodine	1
7	321-4	Capscrew	1
8	3256-22	Washer	1
9	43-3780	Swivel — Throttle Control	1
10	25-8640	Machine Screw	1
11	43-1940	Adapter — Temp. Gauge	1
12	32152-1	Locknut w/Flange	1
13	43-1440	Engine	1
14	2412-36	Clamp Worm Drive	1
15	2412-79	Clamp	1
16	3290-378	Cable Tie	1
17	5-3637	Washer	1
18	3254-2	Lockwasher Int. Tooth	3
19	42-9580	Nut	2
21	42-9100	Belt Fan	1
22	53-9710	Engine Mount	2
23	53-9680	Engine Mount — Rubber	2
24	32128-23	Locknut w/Flange	2
25	3256-64	Washer	4
26	43-5950	Lockwasher	4
27	43-3510	Pulley Engine	1
28	43-3210	Capscrew	4
29	53-9460	Engine Support Front	1

Ref. No.	Part No.	Description	No. Used
30	3257-33	Key Woodruff	1
31	302-10	Grease Fitting	1
32	43-3720	Collar — Bearing	1
33	251-252	Ball Bearing	1
34	32120-22	Ring — Retaining Internal	1
35	32120-69	Ring — Retaining External	1
36	3245-1	Set Screw Socket Head	2
37	27-1960	Hub Engine	1
38	324-12	Capscrew	2
39	53-9480	Washer	2
40	42-9600	Lockwasher	3
41	43-3190	Capscrew	3
42	21-1820	Stud — Belt Retainer	4
43	3290-357	Locking Nut w/Flange	10
44	32128-37	Locknut w/Flange	2
45	3234-11	Capscrew	4
46	43-3220	Capscrew	2
47	3253-4	Lockwasher	2
48	43-3790	Bracket Belt Guide	1
49	4-2390	Washer	1
50	3217-5	Nut	1
51	3253-3	Lockwasher	3
52	43-3730	Bracket Throttle Control	1
53	329-7	Capscrew	1
54	43-3760	Lever Throttle	1
55	47-7420	Hose	1
56	43-4230	Hose	1

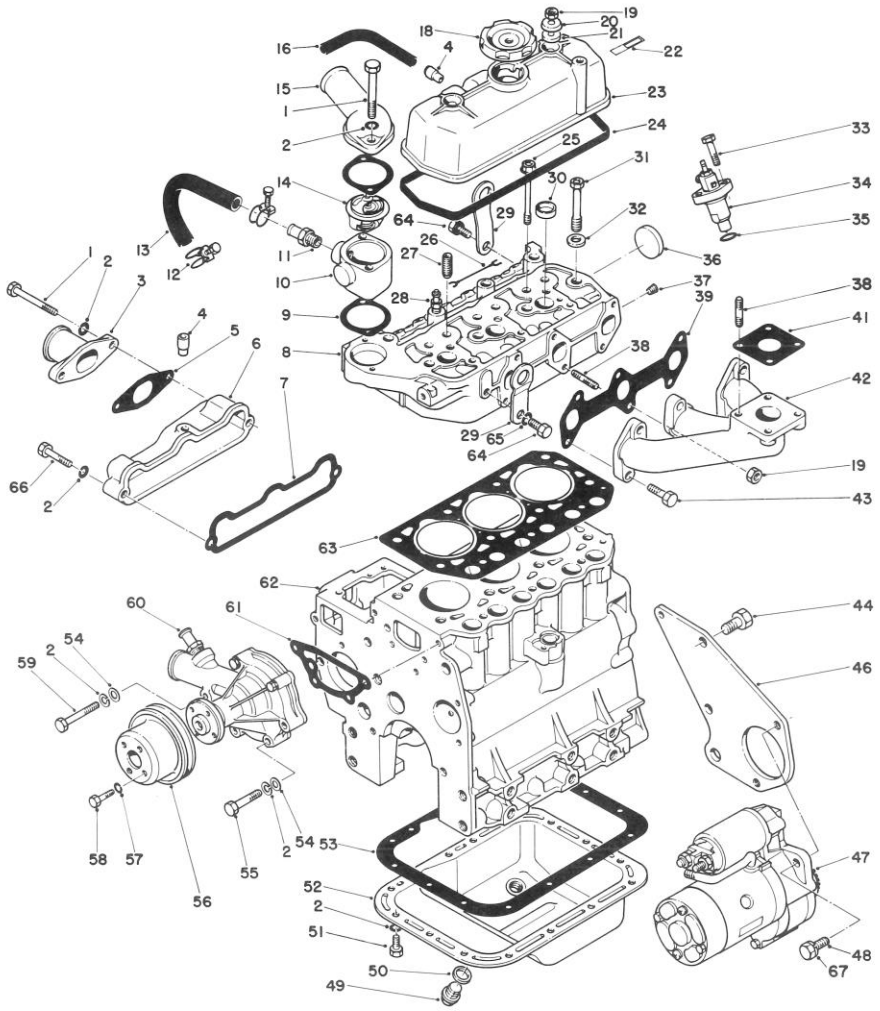


ENGINE ASSEMBLY (Continued)

Ref. No.	Part No.	Description	No. Used
1	43-1910	Fan, Cooling	1
2	43-3690	Fan Shaft	1
3	3257-30	Key Woodruff	2
4	43-3700	Hub — Fan	1
5	38-7820	Bearing	2
6	53-9750	Fan Mount	1
7	3290-357	Nut w/Locking Flange	7
8	43-3870	Support Muffler	1
9	3233-14	Carriage Bolt	1
10	43-3880	Pulley	1
11	43-5910	V-Belt	1
12	29-8910	Washer	2
13	32136-3	Hex Slotted Nut	2
14	3272-16	Cotter Pin	2
15	3-6803	Washer	A/R
16	32128-23	Locknut Flange Side Lock	1
17	43-3850	Muffler	1
18	66-5310	Idler Pulley	1
19	66-5320	Spacer	1

Ref. No.	Part No.	Description	No. Used
20	42-9580	Nut	4
21	3253-4	Lockwasher	5
22	68-9150	Engine Mount	1
23	32128-37	Locknut w/Flange	2
24	43-3200	Capscrew	4
25	42-9600	Lockwasher	4
26	43-3530	Pulley Flywheel	1
27	324-11	Capscrew	2
28	53-9480	Washer	2
29	53-9680	Engine Mount Rubber	2
30	42-6080	Shim	A/R
31	3234-11	Capscrew	4
32	66-7030	Capscrew w/Washer	2
33	3234-12	Capscrew w/Locking Flange	2
34	42-9230	Capscrew	1
35	3253-3	Lockwasher	4
36	321-3	Capscrew	4
37	68-9110	Shim	A/R
*	68-9111	Shim	A/R

*Not Illustrated

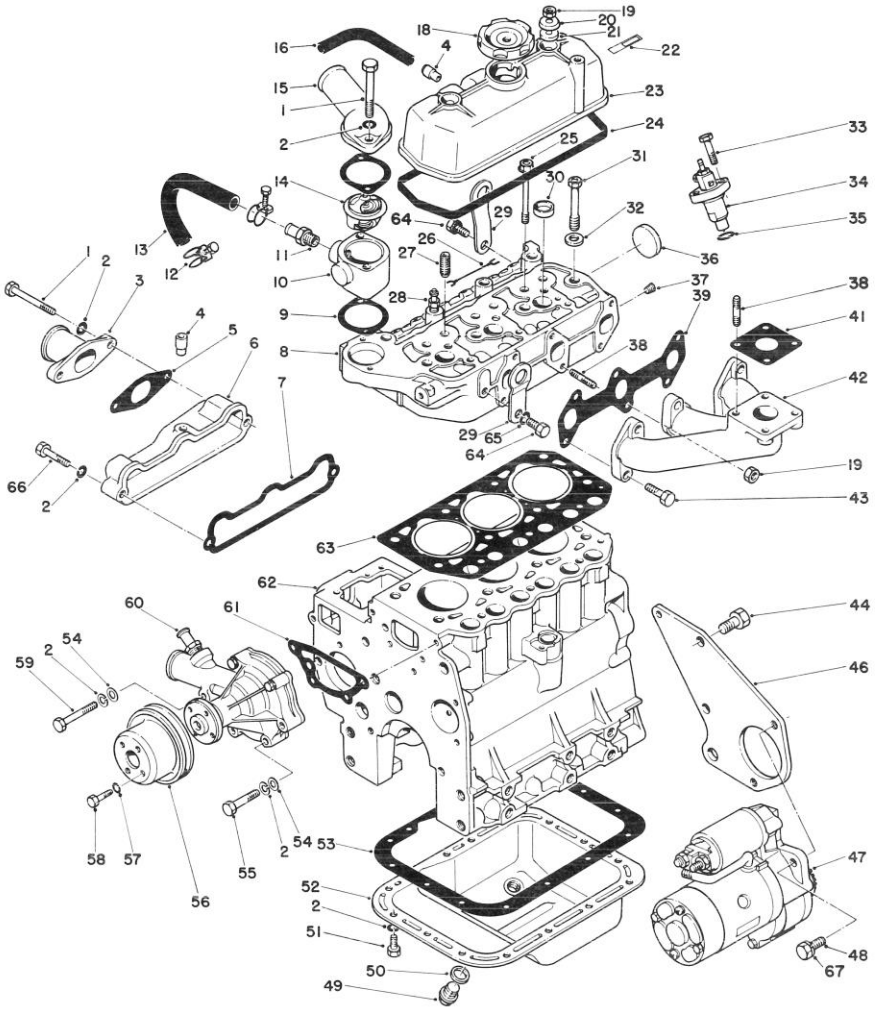


T-0431-89

ENGINE

Ref. No.	Part No.	Description	No. Used
1	42-9310	Capscrew	4
2	42-9850	Lockwasher	24
3	42-9150	Pipe Inlet	1
4	42-7510	Pipe	2
5	42-9160	Gasket, Inlet Pipe	1
6	42-9120	Manifold Assembly, Intake	1
7	42-9140	Gasket, Intake Manifold	1
8	42-7450	Head Assembly, Cylinder	1
9	42-7550	Gasket	2
10	43-1790	Fitting Thermostat	1
11	42-7740	Nipple, Hose	1
12	43-3140	Clamp, Hose	2
13	43-3130	Hose, Water (Incl. Ref. #12)	1
14	43-1780	Thermostat	1
15	42-7540	Fitting, Water Outlet	1
16	42-7430	Pipe, Air Breather	1
18	42-7420	Cap, Oil Filter	1
19	42-9580	Nut (8)	3
20	42-9800	Washer	2
21	42-7490	Seal, Oil	2
22	42-7530	Label, Engine No.	1
23	42-7500	Cover Assembly, Rocker	1
24	42-7520	Gasket, Rocker Cover	1

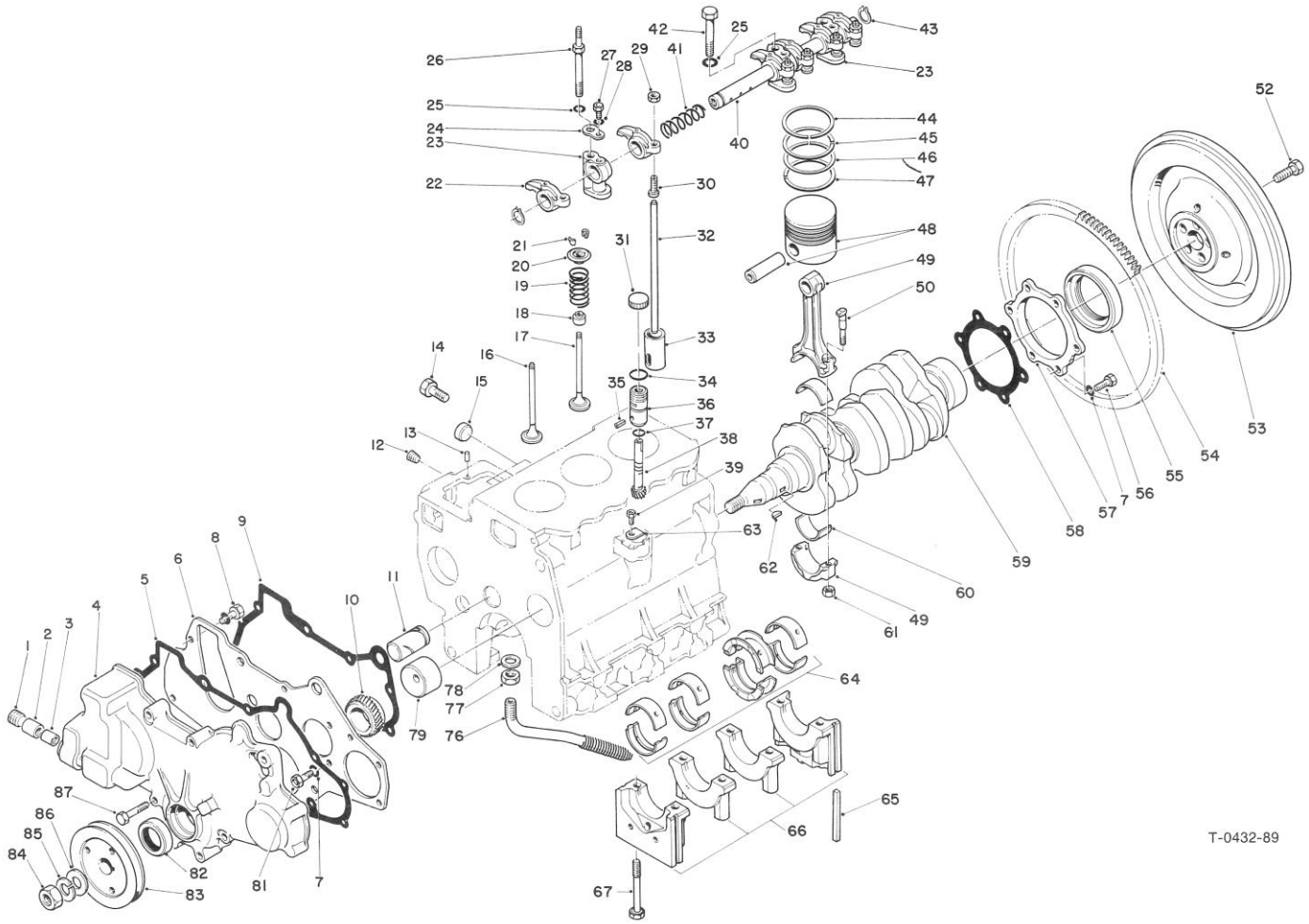
Ref. No.	Part No.	Description	No. Used
25	42-9330	Bolt, Cylinder Head (10 x 90)	3
26	42-9180	Wire Glow Plug Lead	2
27	42-7460	Guide Valve	6
28	42-7480	Glow Plug	3
29	42-7440	Hanger, Engine	2
30	42-7080	Cap, Sealing (25)	3
31	42-9320	Bolt, Cylinder Head (12 x 98)	8
32	42-9790	Washer, Cylinder Head Bolt	8
33	42-9390	Bolt (8 x 32)	6
34	44-8070	Nozzle & Holder Assembly	3
35	42-8120	Gasket, Nozzle Holder	3
36	42-7090	Cap, Sealing (45)	1
37	42-7410	Plug, Taper 1/8	1
38	42-9570	Stud (8 x 25)	5
39	42-9170	Gasket, Exhaust Manifold	1
41	42-9110	Gasket	1
42	43-1870	Manifold, Exhaust	1
43	42-9520	Capscrew (8 x 30)	5
44	42-9240	Capscrew (12 x 28)	3
46	43-1770	Plate, Rear	1
47	46-7610	Starter Assembly	1
48	43-0090	Capscrew (10 x 25)	2
49	42-9260	Plug, Oil Drain	1



ENGINE (Continued)

Ref. No.	Part No.	Description	No. Used
50	42-7290	Gasket, Oil Drain Plug (18)	1
51	42-9230	Capscrew (8 x 16)	15
52	42-7280	Pan Assembly Oil	
		(Incl. Ref. #49 50)	1
53	42-7300	Gasket, Oil Pan	1
54	42-9660	Washer, Plain (8)	4
55	42-9500	Capscrew (8 x 45)	3
56	42-9070	Pulley, Water Pump	1
57	43-5930	Lockwasher	4
58	42-9490	Capscrew (6 x 12)	4

Ref. No.	Part No.	Description	No. Used
59	42-9510	Capscrew (8 x 60)	1
60	42-9080	Pump Assembly, Water	1
61	42-9090	Gasket, Water Pump	1
62	48-2020	Block Sub Assembly, Cylinder	1
63	42-7470	Gasket, Cylinder Head	1
64	42-9300	Capscrew (10 x 20)	2
65	42-9600	Lockwasher	2
66	42-9530	Capscrew (8 x 40)	1
67	42-9600	Lockwasher	2
*	42-9200	Complete Gasket Set	1



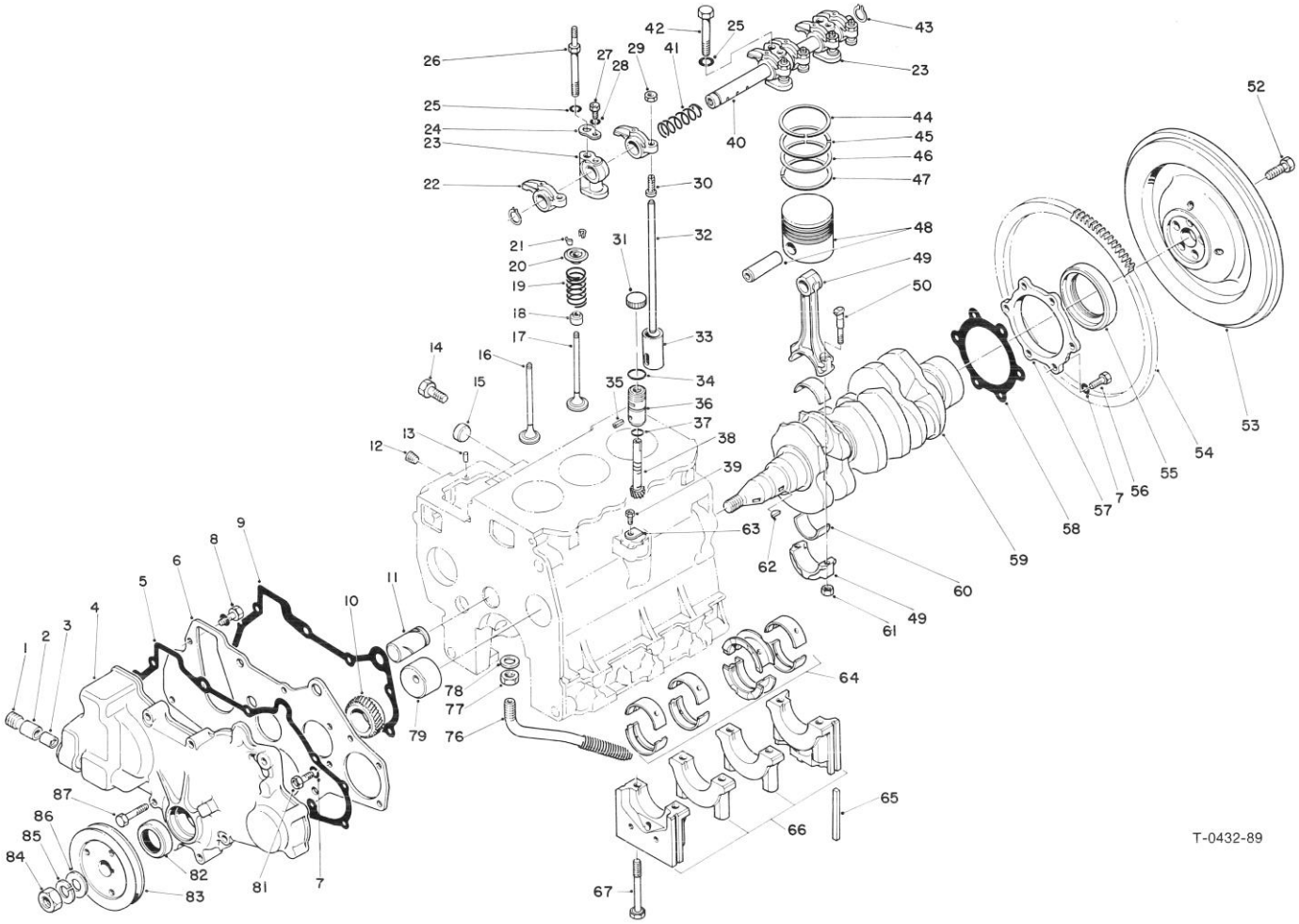
ENGINE (Continued)

Ref. No.	Part No.	Description	No. Used
1	42-7400	Plug, Taper (1/2)	1
2	42-7320	Bearing, Needle	1
3	42-7310	Bearing, Needle	1
4	42-7330	Case, Gear	1
5	42-7340	Gasket, Gear Case	1
6	62-3740	Plate, Front	1
7	42-9850	Lockwasher	11
8	62-3730	Capscrew w/Washer (8 x 16)	2
9	42-7150	Gasket, Front Plate	1
10	42-7700	Gear, Crankshaft	1
11	42-7110	Shaft, Idler	1
12	42-7210	Plug, Taper (PT 1/4)	3
13	42-7030	Pin, Dowel	2
14	42-9250	Capscrew (12 x 25)	4
15	42-7080	Cap, Sealing (25)	2
16	42-7900	Valve, Intake	3
17	42-7910	Valve, Exhaust	3
18	42-7870	Seal, Valve Stem	6
19	42-7880	Spring, Valve	6
20	42-7850	Retainer, Valve Spring	6
21	42-7860	Lock, Valve Spring Retainer	12
22	42-7940	Arm, Rocker	6
23	42-7970	Stay, Rocker	3
24	42-7950	Washer Seat	2
25	42-9600	Washer, Spring (10)	3
26	42-9360	Bolt	2
27	42-9350	Capscrew (6 x 16)	2

Ref. No.	Part No.	Description	No. Used
28	43-5930	Lockwasher	2
29	42-9620	Nut, Jam (10)	6
30	42-7980	Screw, Adjusting	6
31	49-7990	Cap Shipping	1
32	42-7920	Rod, Push	6
33	42-7890	Tappet	6
34	42-9010	O-Ring (18)	1
35	42-8970	Pin, Spring	1
36	42-8980	Sleeve, Speedmeter Driven Gear	1
37	42-8990	O-Ring B	1
38†		Gear, Speedmeter Driven	1
39	42-9440	Capscrew (6 x 14)	1
40	42-7960	Shaft Assembly, Rocker	1
41	42-7930	Spring, Rocker Shaft L.H.	1
42	42-9370	Capscrew (10 x 70)	1
43	42-7990	Ring, Snap (19)	2
44	42-7570	Ring, Set, Piston Std.	3
45‡	42-7580	Ring Set, Piston 0.25 (.010) O.S.	3
46‡	42-7590	Ring Set, Piston 0.50 (.020) O.S.	3
47‡	42-7600	Ring Set, Piston 0.75 (.030) O.S.	3
48	42-7610	Piston & Piston Pin Std.	3
*‡	42-7620	Piston & Piston Pin 0.25 (.010) O.S.	3
*‡	42-7630	Piston & Piston Pin 0.50 (.020) O.S.	3
*‡	42-7640	Piston & Piston Pin 0.75 (.030) O.S.	3

*Not Illustrated
†Not serviced separately

‡Dimension's in parenthesis are given in inches.



ENGINE (Continued)

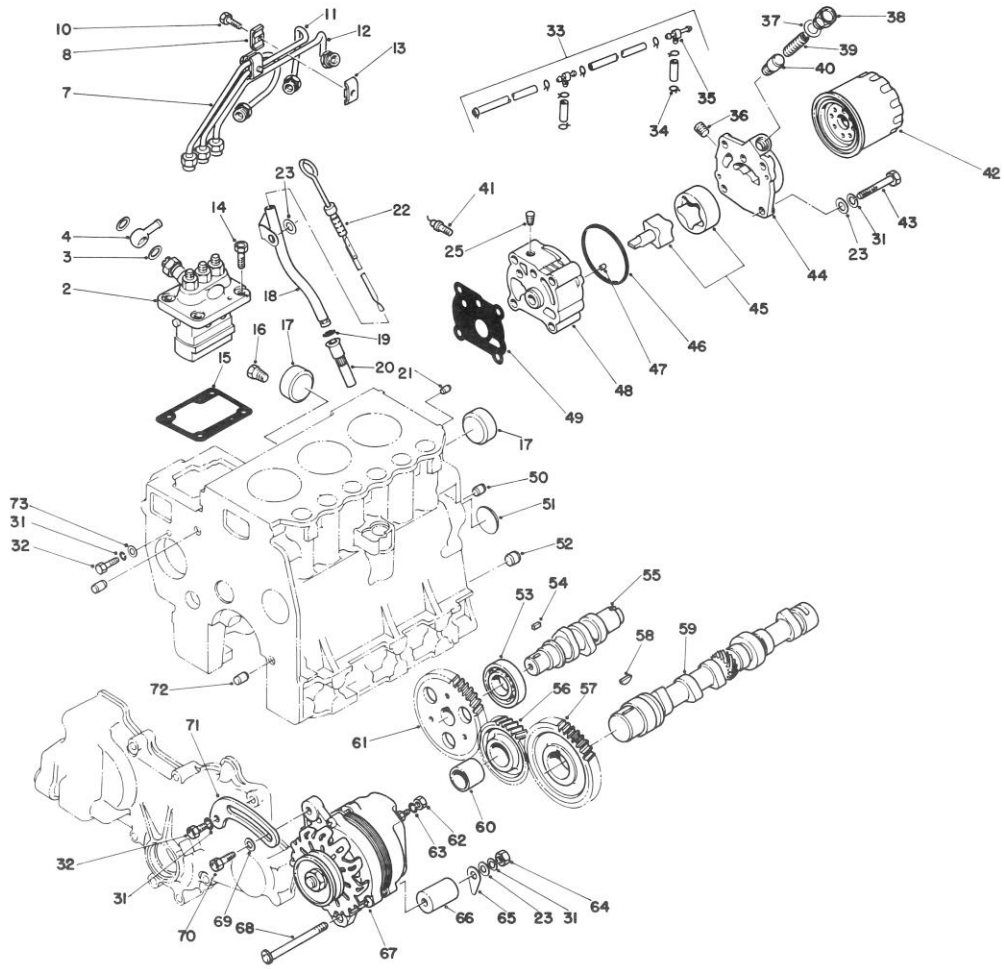
Ref. No.	Part No.	Description	No. Used
49	42-7650	Rod Assembly, Connecting	3
50	42-9470	Bolt Connecting Rod	6
52	54-8670	Bolt Flywheel	5
53	43-1800	Flywheel (Incl. Ref. #54)	1
54	43-1810	Gear, Ring	1
55	42-7060	Seal, Oil	1
56	42-9220	Capscrew (8 x 22)	6
57	42-7120	Case, Oil Seal	1
58	42-7130	Gasket, Oil Seal	1
59	42-7710	Crankshaft	1
60	42-7660	Bearing Set, Connecting Rod Std.	3
*‡	42-7670	Bearing Set, Connecting Rod 0.25 (.010) U.S.	3
*‡	42-7680	Bearing Set, Connecting Rod 0.50 (.020) U.S.	3
*‡	42-7690	Bearing Set, Connecting Rod 0.75 (.030) U.S.	3
61	42-9590	Nut, Connecting Rod	6
62	42-7730	Key, Woodruf (5 x 19)	2
63	42-9020	Plate, Locking	1
64	42-7230	Bearing Set, Crankshaft Std.	1

Ref. No.	Part No.	Description	No. Used
*‡	42-7240	Bearing Set, Crankshaft 0.25 (.010) U.S.	1
*‡	42-7250	Bearing Set, Crankshaft 0.50 (.020) U.S.	1
*‡	42-7260	Bearing Set, Crankshaft 0.75 (.030) U.S.	1
65	42-7040	Seal Side	4
66†		Cap, Assembly, Bearing	1
67	42-9210	Bolt, Bearing Cap	8
76	48-2010	Screen Assembly Oil	1
77	48-1990	Nut, Jam (16)	1
78	48-1980	Gasket	1
79	42-7100	Bushing, Camshaft	1
81	42-9230	Capscrew (8 x 16)	3
82	42-7390	Seal, Oil	1
83	42-7720	Pulley, Crankshaft	1
84	43-6470	Nut (18)	1
85	42-9860	Washer Spring (18)	1
86	42-9810	Washer, Plain (18)	1
87	42-9500	Capscrew	8
*	42-8960	Driven Unit, Speedmeter (Incl. Ref. #34-38)	1

*Not Illustrated

†Not Available

‡Dimensions in parenthesis are given in inches.



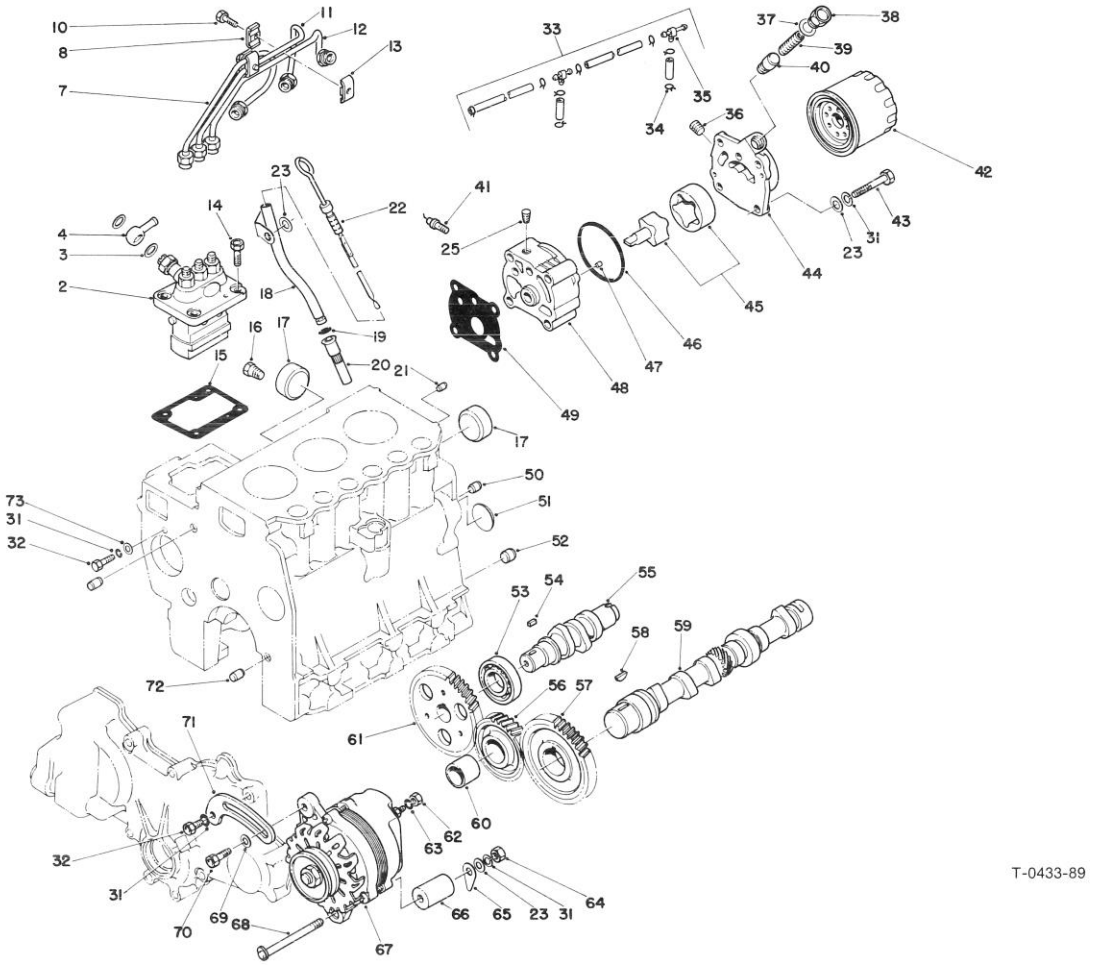
ENGINE (Continued)

Ref. No.	Part No.	Description	No. Used
2	42-8000	Pump Assembly, Fuel Injection	1
3	42-9830	Washer, Seal	2
4	42-8100	Collar, Union	1
7	42-8130	Pipe Assembly, Fuel Injection No. 1	1
8	42-8160	Clamp	2
10	43-2600	Capscrew	2
11	42-8140	Pipe Assembly, Fuel Injection No. 2	1
12	42-8150	Pipe Assembly, Fuel Injection No. 3	1
13	42-8170	Clamp	2
14	43-0110	Capscrew (8 x 20)	4
15‡	42-8010	Shim, Adjusting 0.2 (.008)	A/R
*‡	42-8020	Shim, Adjusting 0.3 (.012)	A/R
*‡	42-8030	Shim, Adjusting 0.4 (.016)	A/R
*‡	42-8040	Shim, Adjusting 0.5 (.020)	A/R

Ref. No.	Part No.	Description	No. Used
*‡	42-8050	Shim, Adjusting 0.6 (.024)	A/R
*‡	42-8060	Shim, Adjusting 0.7 (.028)	A/R
*‡	42-8070	Shim, Adjusting 0.8 (.032)	A/R
*‡	42-8080	Shim, Adjusting 0.9 (.036)	A/R
*‡	42-8090	Shim, Adjusting 1.0 (.039)	A/R
16	281-1	Plug, Taper (NPTF ¼)	1
17	42-7090	Cap, Sealing (45)	2
18	42-7050	Guide, Oil Level Gauge	1
19	43-2710	O-Ring (9)	1
20	43-2900	Retainer, Oil Level Guide	1
21	42-7160	Pin, Dowel (8)	1
22	42-7270	Gauge Assembly, Oil Level	1
23	42-9660	Washer Plain (8)	6
25	42-7410	Plug, Taper	1
31	42-9850	Lockwasher	7

*Not Illustrated

‡Dimensions in parenthesis are given in inches.

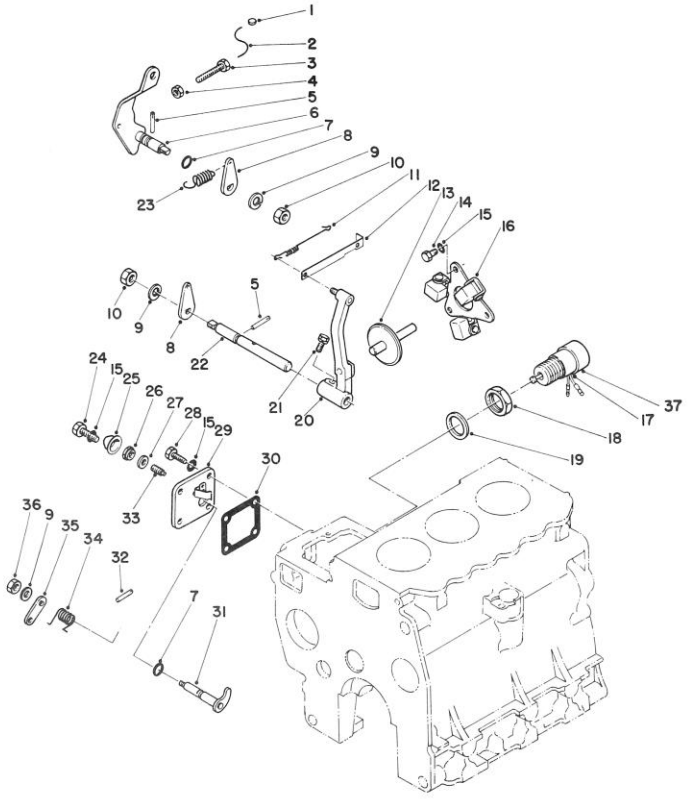


ENGINE (Continued)

Ref. No.	Part No.	Description	No. Used
32	42-9230	Capscrew (8 x 16)	2
33	42-8180	Pipe Assembly, Fuel Return	1
34	2412-79	Clamp, Hose	8
35	42-8190	Joint	2
36	42-7210	Plug, Taper (¼)	1
37	42-8880	Gasket	1
38	42-8870	Plug	1
39	42-8930	Spring Relief	1
40	42-8860	Plunger, Relief	1
41	42-9060	Switch Assembly Oil Pressure	1
42	42-9030	Filter Assembly Oil	1
43	42-9480	Capscrew (8 x 65)	4
44	42-8920	Cover, Oil Pump	1
45	42-8910	Rotor Assembly, Oil Pump	1
46	42-8940	O-Ring	1
47	42-7030	Pin, Dowel	2
48	42-8900	Body, Oil Pump	1
49	42-8950	Gasket, Oil Pump Body	1
50	42-7180	Bushing, Knock	2
51	42-7170	Plug, Expansion (40)	1
52	42-7200	Bushing, Knock	1
53	42-7820	Bearing, Ball	1

Ref. No.	Part No.	Description	No. Used
54	42-7840	Key, Sunk (5 x 12)	1
55	42-7810	Shaft, Fuel Injection Pump Cam	1
56	42-7790	Gear Assembly, Idler	1
57	42-7780	Gear, Camshaft	1
58	42-7730	Key Woodruff	1
59	42-7770	Camshaft	1
60		Bushing, Idler Gear	1
61	42-7830	Gear, Fuel Injection Pump Cam	1
62	43-5970	Nut	1
63	43-5920	Lockwasher	1
64	42-9580	Nut (8)	1
65	43-0370	Shim	A/R
66	43-0380	Spacer	1
67	43-0390	Alternator Model AH2035M4	1
68	43-1900	Capscrew (8 x 89)	1
69	54-8660	Washer	1
70	54-8650	Capscrew Flange Hd.	1
71	43-0400	Brace Alternator	1
72	42-7190	Bushing Knock	2
73	42-9820	Washer	1
*	42-8850	Oil Pump Assembly (Incl. Ref. 36-40, 44-48)	1

*Not Illustrated

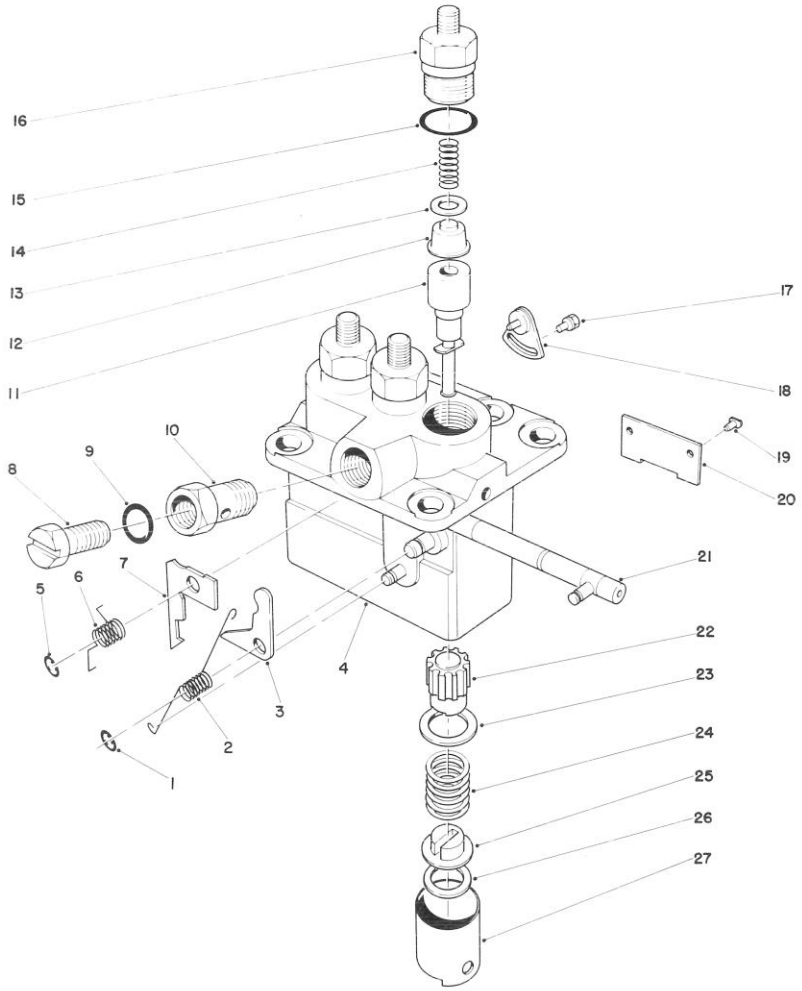


T-0434-89

ENGINE (Continued)

Ref. No.	Part No.	Description	No. Used
1	42-8690	Metal Sealing	1
2	42-8700	Wire	1
3	42-9420	Bolt High Speed Set	1
4	43-2830	Nut	1
5	42-8810	Pin, Grooved	2
6	42-8780	Lever Assembly Speed Control	1
7	42-8830	O-Ring	2
8	42-8770	Lever, Governor Spring	2
9	42-9850	Lockwasher	2
10	42-9580	Jam Nut	2
11	42-8740	Spring Tie Rod	1
12	42-8750	Tie Rod	1
13	42-8720	Sliding Shaft Assembly	1
14	42-9430	Capscrew	3
15	43-5930	Lockwasher	7
16	42-8710	Weight Assembly Governor	1
17	43-2730	Solenoid, Tubular	1
18	43-2750	Nut	1
19	43-2740	Gasket	1

Ref. No.	Part No.	Description	No. Used
20	42-8730	Lever Assembly, Governor	1
21	42-9450	Bolt Washer Assembled	1
22	42-8760	Governor Shaft	1
23	42-8820	Governor Spring	1
24	43-2800	Capscrew	1
25	43-2820	Sealing Cap	1
26	43-5960	Nut Special	1
27	43-3120	Washer, Seal	1
28	42-9400	Capscrew	3
29	42-8790	Cover Assembly (Incl. Ref. #26, 27 & 33)	1
30	42-8800	Gasket Cover	1
31	44-8090	Lever Assembly Stop	1
32	42-8810	Pin, Grooved	1
33	43-3160	Screw Adjusting	1
34	44-8100	Spring Return	1
35	43-2770	Lever, Stop	1
36	42-9640	Jam Nut	1
37	62-6940	Cap	1



T-0435-89

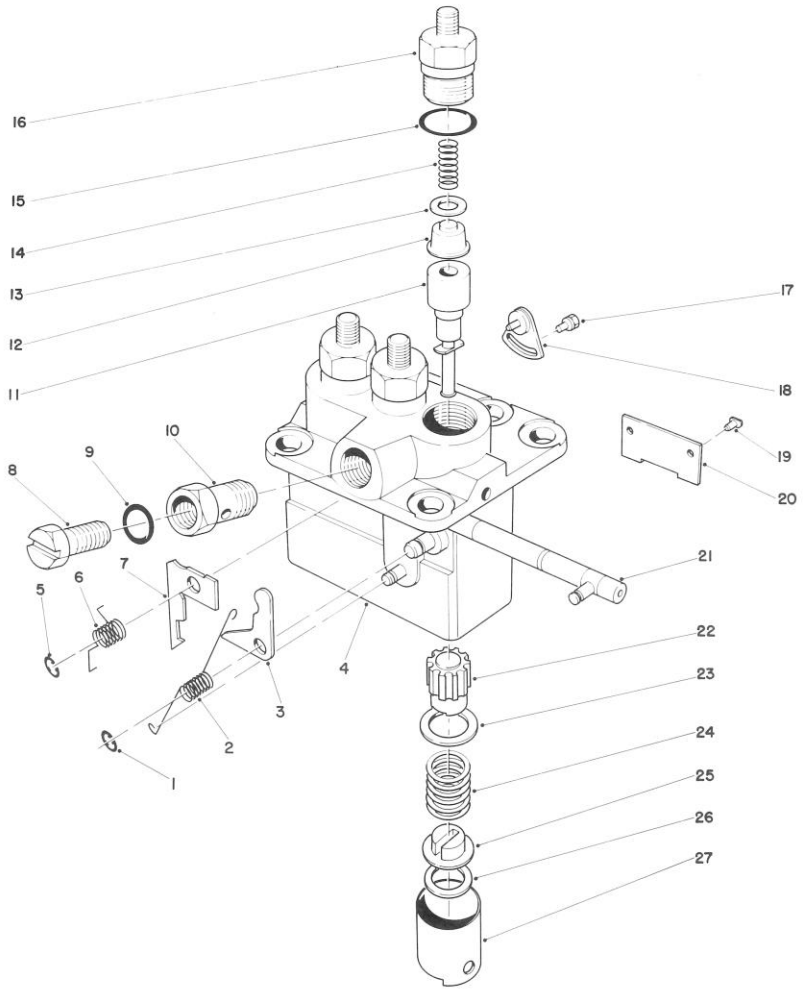
FUEL INJECTION PUMP ASSEMBLY NO. 42-8000

Ref. No.	Part No.	Description	No. Used
1	43-3100	E-Ring	1
2	43-3110	Spring, Ungleich Set	1
3‡	43-2910	Plate, Ungleich Set 16.9 (.665)	A/R
*‡	43-2920	Plate, Ungleich Set 16.8 (.661)	A/R
*‡	43-2930	Plate, Ungleich Set 16.7 (.657)	A/R
*‡	43-2940	Plate, Ungleich Set 16.6 (.654)	A/R
*‡	43-2950	Plate, Ungleich Set 16.5 (.650)	A/R
4		Housing Sub Assembly Pump	1
5	54-8780	E-Ring	1
6	42-8460	Spring Return	1
7‡	43-3000	Plate, Smoke Set 2.2 (.087)	A/R
*‡	54-8700	Plate, Smoke Set 2.3 (.091)	A/R
*‡	43-3010	Plate, Smoke Set 2.4 (.095)	A/R
*‡	54-8710	Plate, Smoke Set 2.5 (.098)	A/R
*‡	43-3020	Plate, Smoke Set 2.6 (.102)	A/R
*‡	56-0960	Plate, Smoke Set 2.7 (.106)	A/R
*‡	43-3030	Plate, Smoke Set 2.8 (.110)	A/R
*‡	54-8730	Plate, Smoke Set 2.9 (.114)	A/R
*‡	43-3040	Plate, Smoke Set 3.0 (.118)	A/R
*‡	54-8740	Plate, Smoke Set 3.1 (.122)	A/R
*‡	43-3050	Plate, Smoke Set 3.2 (.126)	A/R
*‡	54-8750	Plate, Smoke Set 3.3 (.130)	A/R
*‡	43-3060	Plate, Smoke Set 3.4 (.134)	A/R

Ref. No.	Part No.	Description	No. Used
*‡	54-8760	Plate, Smoke Set 3.5 (.138)	A/R
*‡	43-3070	Plate, Smoke Set 3.6 (.142)	A/R
*‡	54-8770	Plate, Smoke Set 3.7 (.146)	A/R
*‡	43-3080	Plate, Smoke Set 3.8 (.150)	A/R
*‡	43-3090	Plate, Smoke Set 4.0 (.157)	A/R
8	42-8370	Screw, Air Breather	1
9	42-9770	Washer	1
10	42-8380	Screw, Hollow	1
11	42-8260	Element Sub Assembly	3
12	42-8250	Delivery Valve Sub Assembly	3
13	42-8240	Gasket, Delivery Valve	3
14	42-8230	Spring, Delivery Valve	3
15	42-8330	O-Ring	3
16	42-8220	Holder, Delivery Valve	3
17	43-3150	Bolt, Washer Assembled	2
18	42-8360	Plate Assembly, Adjusting	2
19	42-8340	Pin, Tappet Guide	3
20	42-8350	Plate	1
21	42-8310	Rack Assembly Control	1
22	42-8270	Sleeve, Plunger Control	3
23	42-8280	Seat, Spring Upper	3
24	42-8290	Spring, Pump Plunger	3
25	42-8320	Seat, Spring Lower	3

*Not Illustrated

‡Dimensions in parenthesis are given in inches.



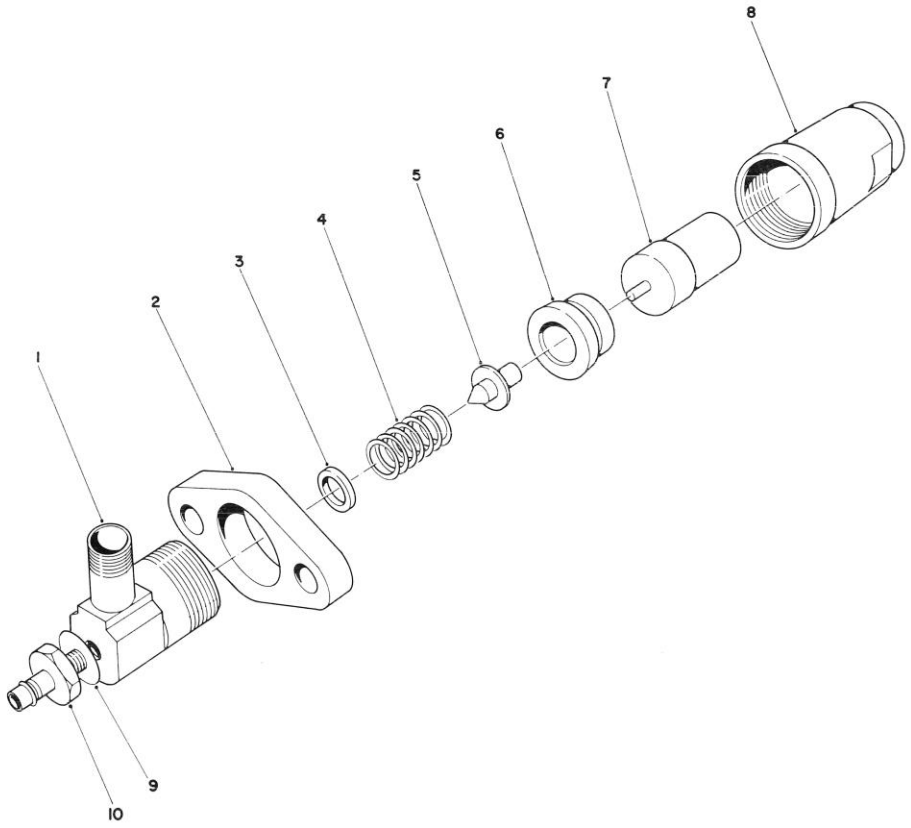
T-0435-89

FUEL INJECTION PUMP ASSEMBLY NO. 42-8000 (Continued)

Ref. No.	Part No.	Description	No. Used
26‡	42-8390	Shim, Plate 0.6 (.024)	A/R
*‡	42-8400	Shim, Plate 0.2 (.008)	A/R
*‡	42-8410	Shim, Plate 0.3 (.012)	A/R
*‡	42-8420	Shim, Plate 0.4 (.016)	A/R
*‡	42-8430	Shim, Plate 0.5 (.020)	A/R
*‡	42-8440	Shim, Plate 0.25 (.010)	A/R

Ref. No.	Part No.	Description	No. Used
*‡	42-8450	Shim, Plate 0.35 (.014)	A/R
*‡	43-6240	Shim, Plate 0.45 (.018)	A/R
*‡	54-8680	Shim, Plate 0.55 (.022)	A/R
*‡	54-8690	Shim, Plate 0.65 (.026)	A/R
27	42-8300	Tappet Sub. Assembly	3

*Not Illustrated
‡Dimensions in parenthesis are given in inches.



T-0436-89

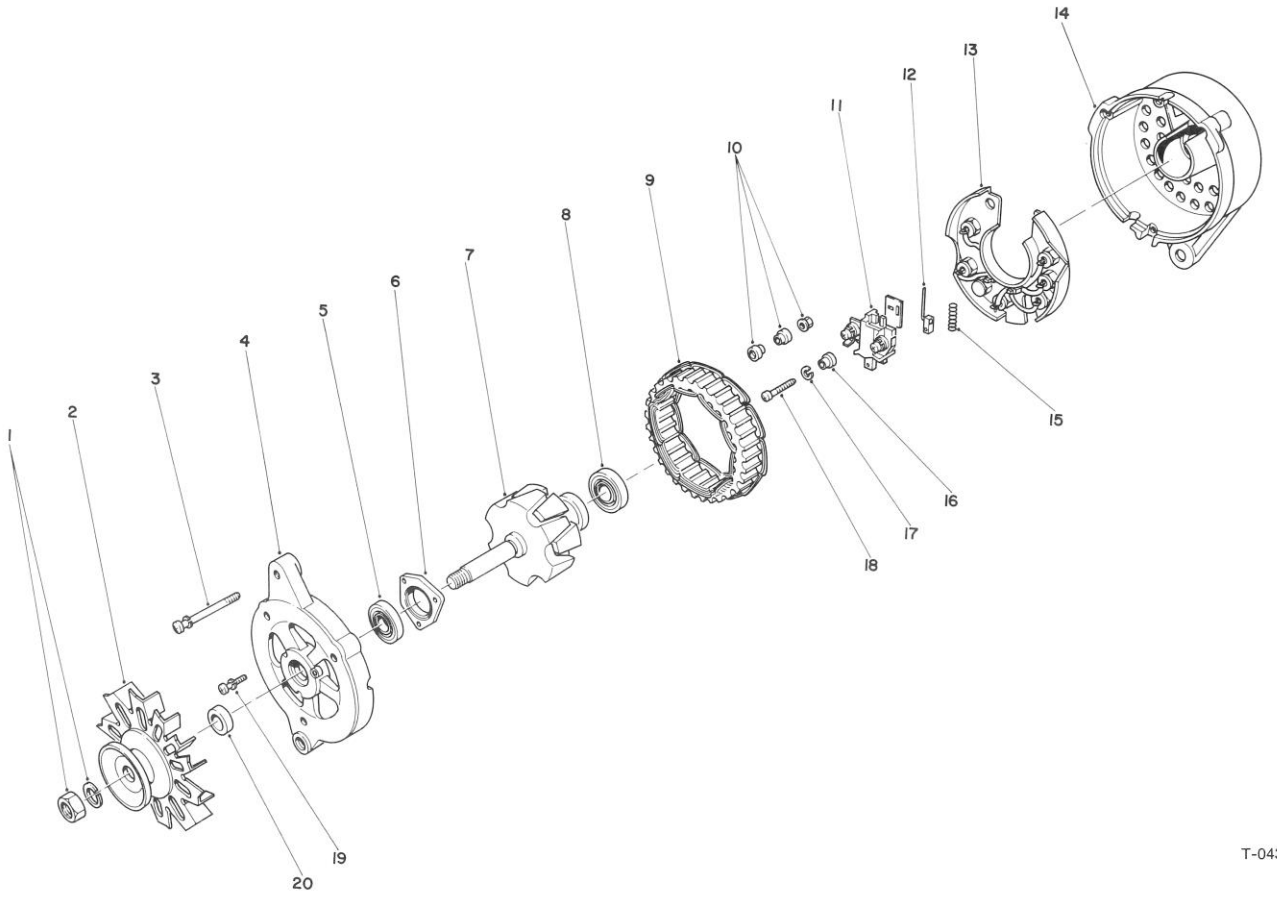
NOZZLE & HOLDER ASSEMBLY NO. 44-8070

Ref. No.	Part No.	Description	No. Used
1	44-8080	Body	3
2	42-8670	Flange	3
3†	42-9680	Washer 1.3 (.051)	A/R
*†	42-9690	Washer 1.35 (.053)	A/R
*†	42-9700	Washer 1.4 (.055)	A/R
*†	42-9710	Washer 0.9 (.035)	A/R
*†	42-9720	Washer 1.0 (.039)	A/R
*†	42-9730	Washer 1.1 (.043)	A/R
*†	42-9740	Washer 1.2 (.047)	A/R

Ref. No.	Part No.	Description	No. Used
*†	42-9750	Washer 0.1 (.004)	A/R
4	42-8630	Spring Pressure	3
5	42-8620	Pin, Pressure	3
6	42-8660	Piece, Distance	3
7	42-8680	Nozzle Assembly	3
8	42-8650	Nut, Retaining	3
9	42-9670	Washer	3
10	42-8640	Nipple	3

*Not Illustrated

†Dimension's in parenthesis are given in inches.

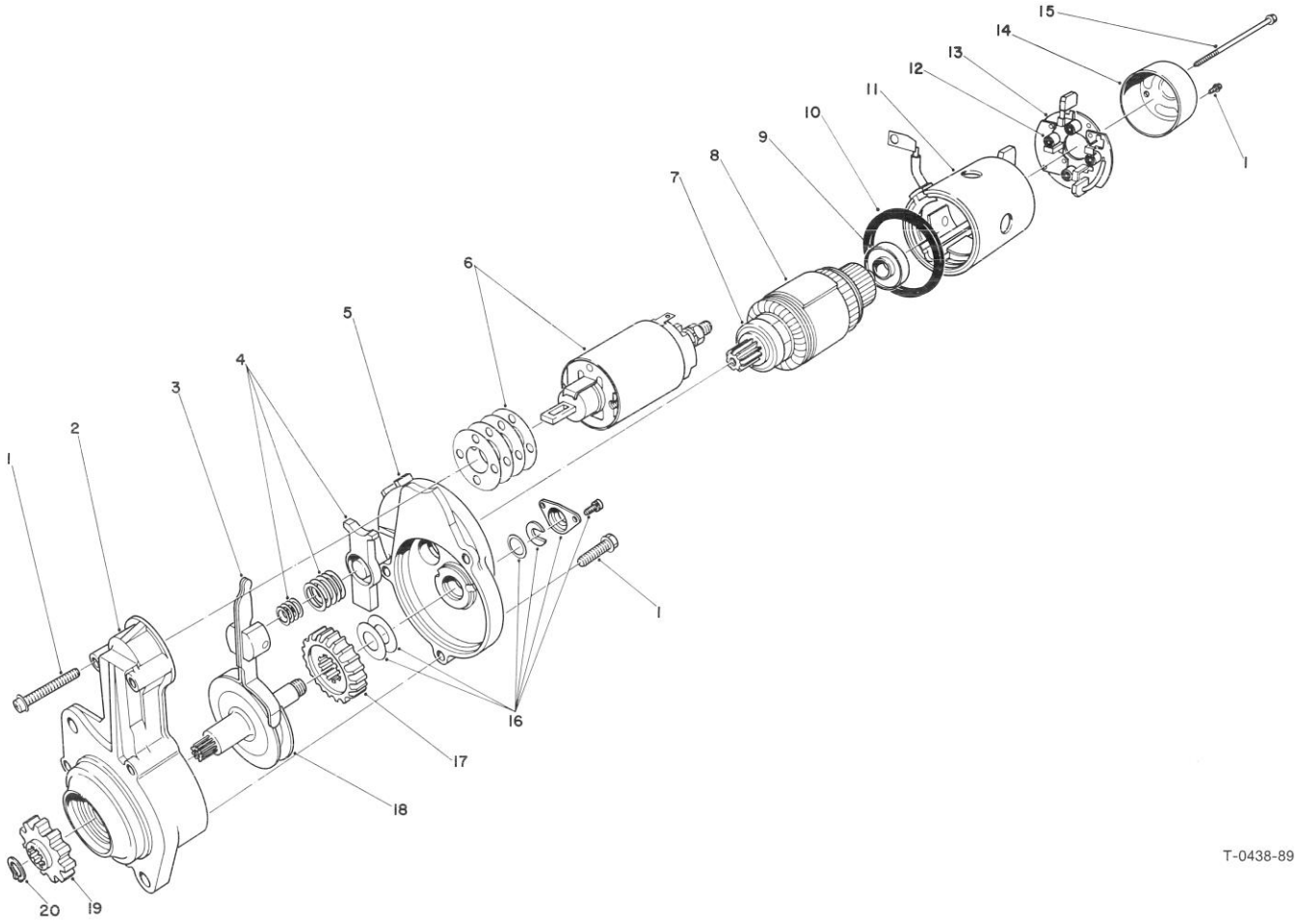


T-0437-89

ALTERNATOR ASSEMBLY NO. 43-0390

Ref. No.	Part No.	Description	No. Used
1	43-1920	Nut Set	1
2	43-0420	Pulley Assembly (Incl. Ref. #20)	1
3	43-0120	Screw Set	1
4	43-0430	Bracket Assembly Front (Incl. Ref. #5-6 & 19)	1
5	43-0440	Bearing, Front	1
6		Plate – Ball Bearing Retainer	1
7	43-0450	Rotor Assembly (Incl. Ref. #8)	1
8	43-0460	Bearing Rear	1
9	43-0470	Stator	1
10	43-0080	Nut Set	1

Ref. No.	Part No.	Description	No. Used
11	43-0490	Holder Assembly Brush (Incl. Ref. #12 & 15)	1
12	43-0500	Brush	2
13	43-0520	Rectifier Assembly	1
14	43-0480	Bracket Assembly, Rear (Incl. Ref. #10-13 & 15-18)	1
15	43-0510	Spring, Brush	1
16	43-2720	Mold	1
17	43-5920	Lockwasher	1
18	43-1890	Screw	1
19	43-0130	Screw Set	1
20		Collar Shaft	1

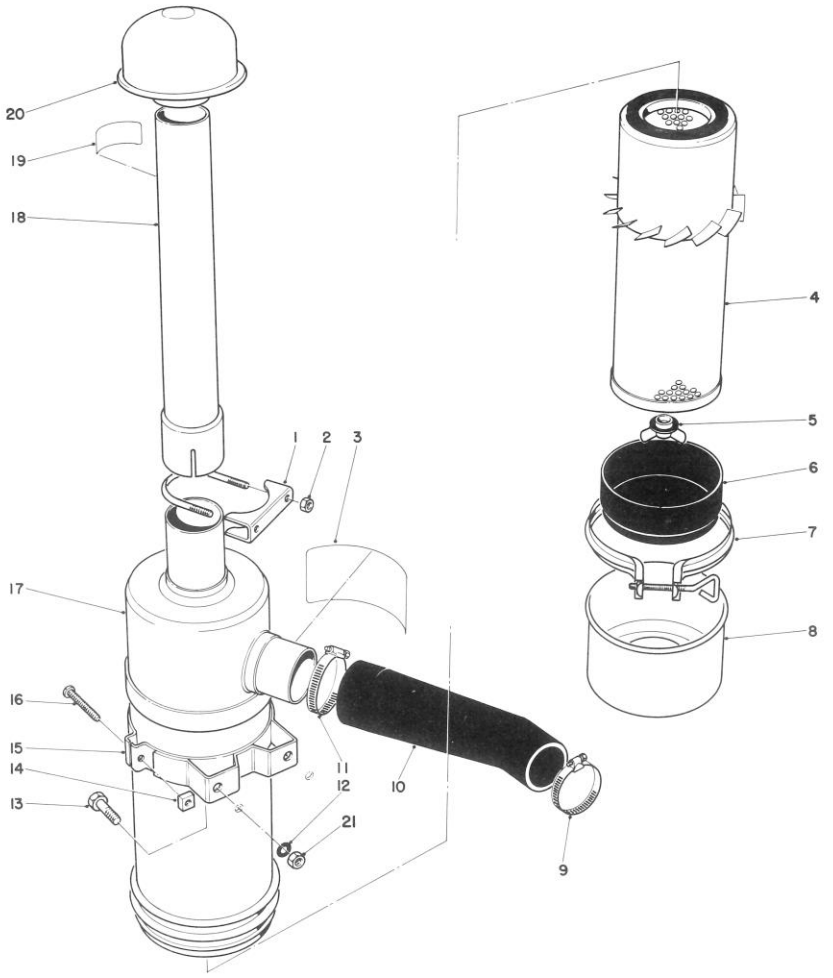


STARTER ASSEMBLY NO. 46-7610

Ref. No.	Part No.	Description	No. Used
1	46-7620	Screw Set	1
2	46-7630	Bracket Assembly, Front	1
3	46-7640	Lever Assembly	1
4	43-0190	Spring Set	1
5	46-7650	Bracket Assembly Center	1
6	46-7660	Switch Assembly	1
7	46-7680	Bearing Front	1
8	46-7670	Armature Set (Incl. Ref. #7 & 9)	1
9	46-7690	Bearing Rear	1
10	46-8050	Packing	1
11	46-7780	Yoke Assembly	1
12	46-8030	Spring Brush	4

Ref. No.	Part No.	Description	No. Used
13	46-7790	Brush Holder Assembly (Incl. Ref. #12)	1
14	46-8040	Bracket Rear	1
15	46-7700	Bolt Set	1
16	46-7770	Cover Set	1
17	46-7760	Gear	1
18	46-7750	Shaft Assembly Pinion	1
19	46-7720	Pinion Set (Incl. Ref. #20)	1
20	46-7730	Snap Ring	1
*	46-7740	Gear Set (Incl. Ref. #17 & 18)	1
*	46-7710	Shaft Assembly, Clutch Set (Incl. Ref. #16-20)	1

*Not Illustrated

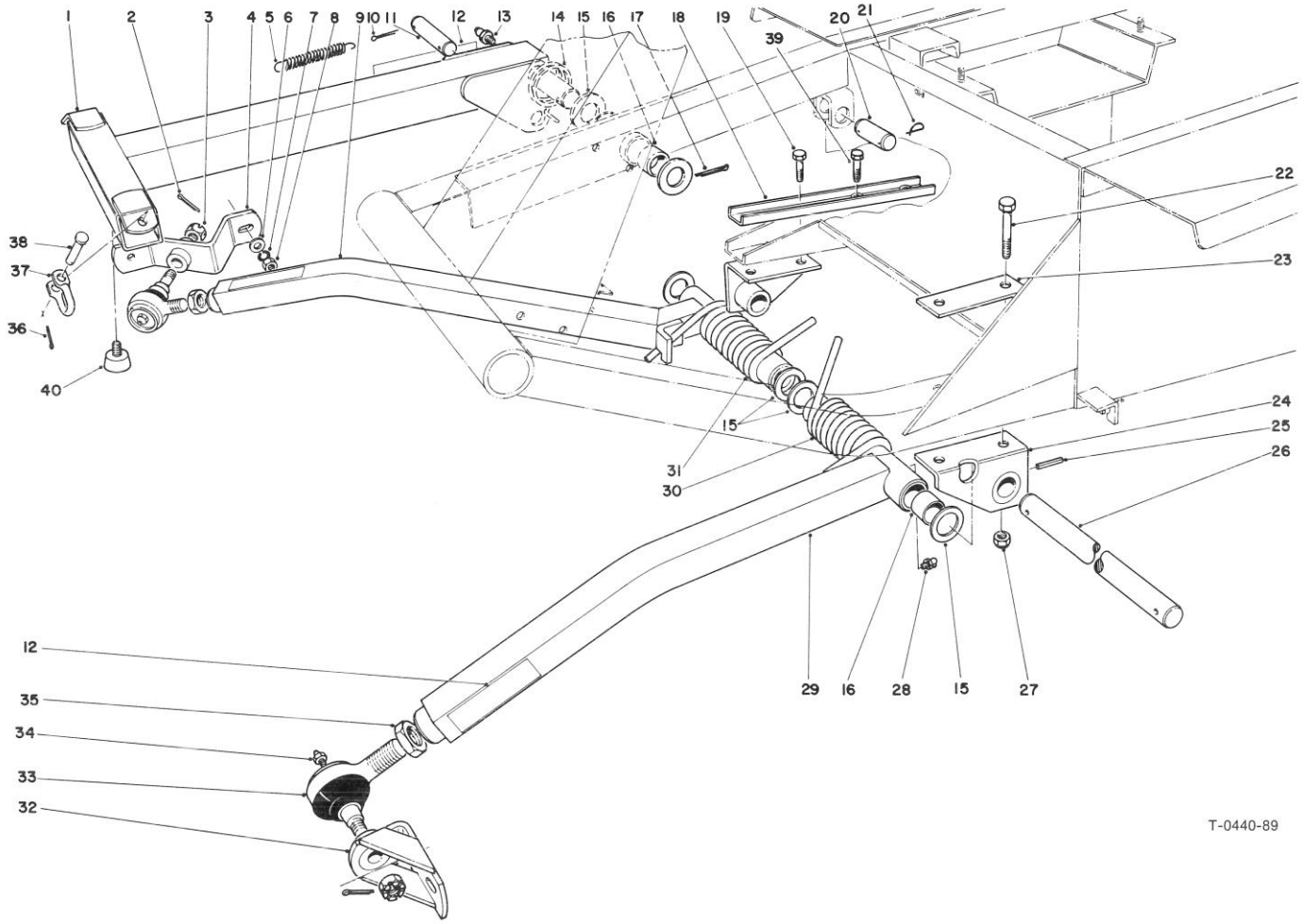


T-0439-89

AIR CLEANER ASSEMBLY

Ref. No.	Part No.	Description	No. Used
1	20-4840	Muffler Clamp (Incl. Ref. #2)	1
2	3217-6	Nut	2
3	27-7160	Decal – Instructions	1
4	27-7110	Element Assembly	1
5	27-7120	Nut & Gasket Assembly	1
6	27-7140	Skirt – Baffle	1
7	27-7130	Clamp Assembly	1
8	27-7150	Cap Assembly	1
9	2412-3	Hose – Clamp	1
10	43-3830	Hose – Air Cleaner	1
11	2412-42	Hose Clamp	1

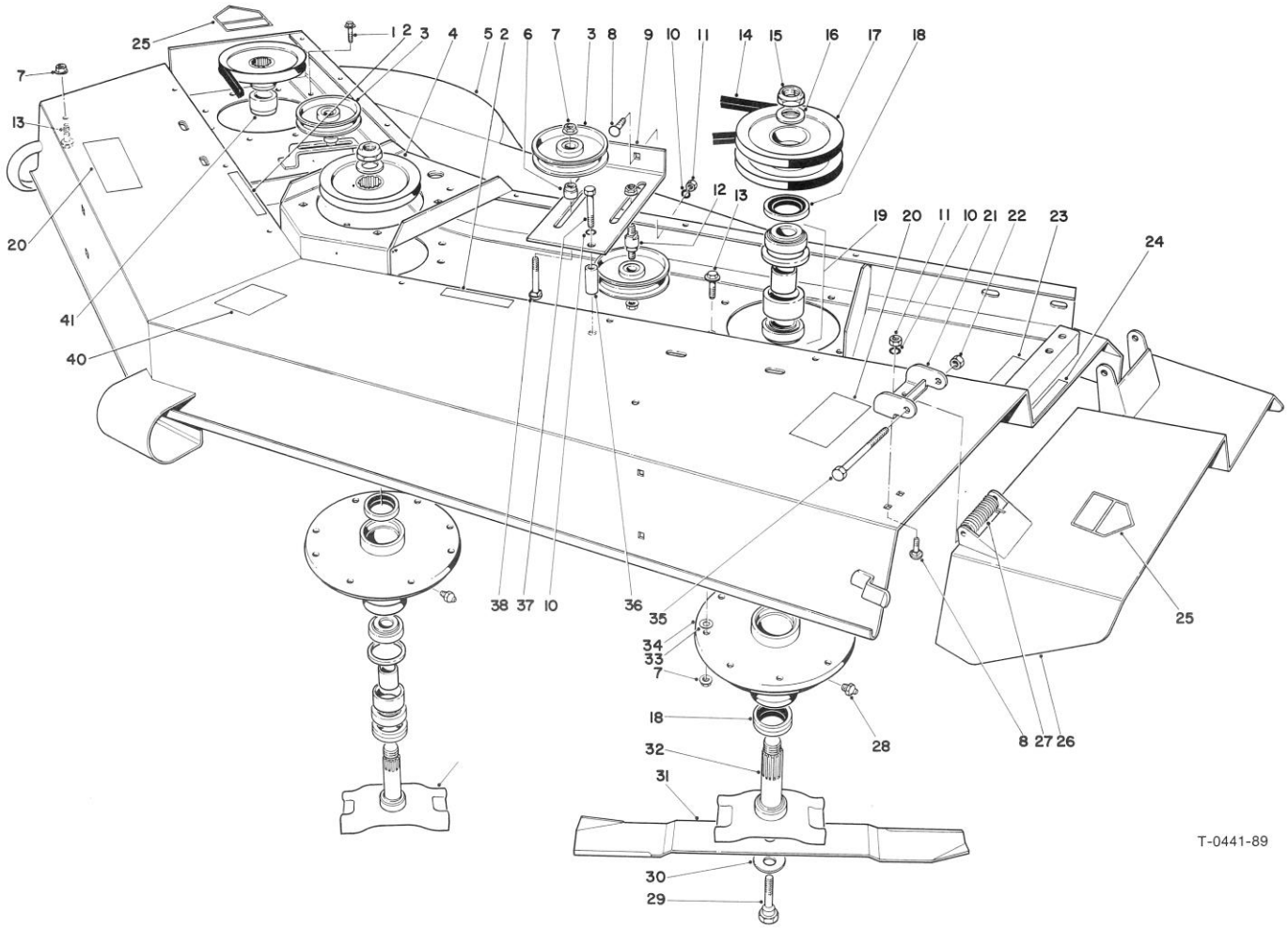
Ref. No.	Part No.	Description	No. Used
12	3253-4	Lockwasher	4
13	322-3	Capscrew	4
14	32107-11	Nut	2
15	27-7170	Band Assy. (Incl. Ref.#14 & 16)	2
16	3258-19	Round Hd. Machine Screw	2
17	27-7100	Air Cleaner Assembly (Incl. Ref. #3-8)	1
18	43-3810	Tube Air Cleaner	1
19	67-1700	Decal – Starting Fluid	1
20	27-7180	Cap Assembly — Air Inlet	1
21	32128-20	Flange Nut	4



PUSH ARM ASSEMBLY

Ref. No.	Part No.	Description	No. Used
1	66-6370	Lift Arm	1
2	3272-11	Cotter Pin	2
3	32136-2	Nut	2
4	21-3020	Ball Joint Mount R.H.	1
5	21-1830	Spring Tension	1
6	3256-25	Flat Washer	1
7	3253-6	Lockwasher	2
8	3217-8	Full Nut	2
9	66-7150	Push Arm R.H. (Incl. Ref. #16 & 28)	1
10	3272-24	Cotter Pin	1
11	24-9510	Pin	1
12	61-3610	Warning Decal	3
13	302-5	Grease Fitting	1
14	46-8840	Spring Lift Arm	1
15	5-1754	Washer	6
16	256-126	Bushing	6
17	3272-33	Cotter Pin	1
18	23-1950	Support Reinforcement	1
19	324-4	Capscrew	2
20	3-7292	Pin	1

Ref. No.	Part No.	Description	No. Used
21	5-3126	Spring Pin	3
22	324-12	Capscrew	2
23	21-3750	Support Plate	1
24	21-2860	Push Arm Bracket	2
25	32121-84	Roll Pin	2
26	21-2990	Shaft Pivot	1
27	32152-9	Nut	4
28	302-33	Grease Fitting	2
29	21-2960	Push Arm L.H. (Incl. Ref. #16 & 28)	1
30	21-2900	Spring – Torsion L.H.	1
31	21-2890	Spring – Torsion R.H.	1
32	21-3050	Ball Joint Mount L.H.	1
33	21-0160	Ball Joint Assembly	2
34	302-2	Grease Fitting	2
35	21-3000	Jam Nut	2
36	3272-10	Cotter Pin	3
37	5-2942	Shackle	3
38	283-10	Pin	3
39	324-9	Hex Hd. Capscrew	1
40	67-9800	Bumper	1

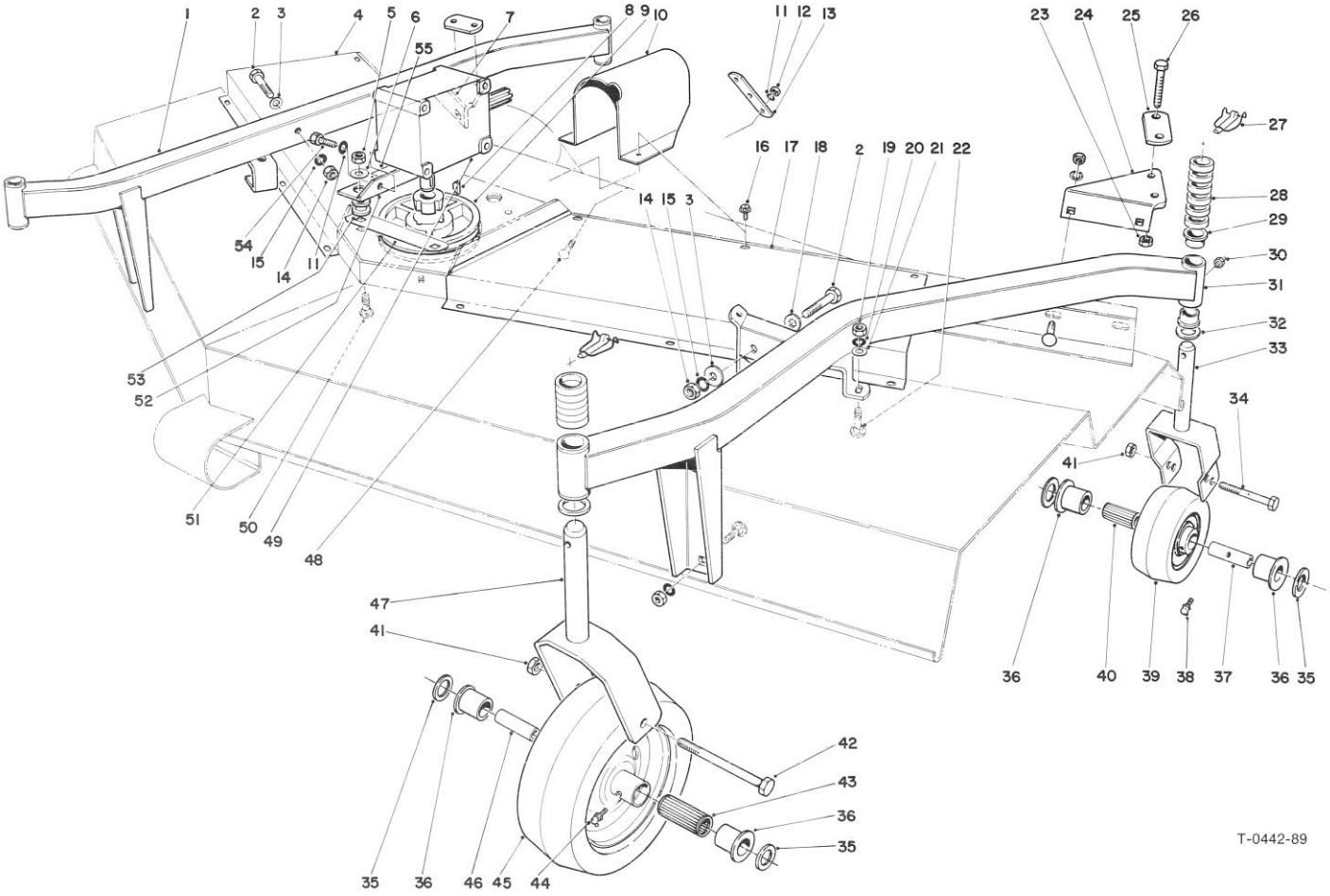


CUTTING UNIT MODEL NO. 30721

Ref. No.	Part No.	Description	No. Used
1	3234-11	Hex Flange Screw	4
2	67-5360	Decal — Danger	2
3	26-1840	Idler Pulley	3
4	26-1760	Pulley	2
5	51-1570	Cutter Deck	1
6	26-1860	Spacer — Idler Pulley	2
7	32128-21	Flange Nut	31
8	3231-27	Carriage Bolt	6
9	26-1870	Idler Mount L.H.	1
10	3253-21	Lockwasher	7
11	3217-7	Nut	6
12	26-1850	Stud — Idler	1
13	3234-1	Hex Flange Screw	23
14	21-0890	V-Belt	3
15	3296-49	Nut	3
16	3-8514	Washer	3
17	26-9100	Pulley L.H.	1
18	253-138	Oil Seal	9
19	49-8320	Bearing Assembly w/Spacers (Matched Set)	3
20	66-1340	Decal — Danger	2
21	51-1530	Hinge Bracket	2

Ref. No.	Part No.	Description	No. Used
22	32153-5	Nut	2
23	68-7280	Decal — Blade Bolt Torque	1
24	66-6380	Decal — Deflector Missing	1
25	43-8480	Decal — Danger	2
26	51-1470	Deflector	1
27	51-1550	Spring	2
28	302-52	Grease Fitting	3
29	26-1820	Capscrew — Grade 8	3
30	26-1990	Washer — Belleville	3
31	29-5530	Blade	3
32	26-1690	Spindle Outer	2
33	3256-24	Washer	A/R
34	60-9700	Spindle Housing	3
35	325-17	Capscrew	2
36	26-1880	Spacer — Idler Mount	1
37	323-12	Capscrew	1
38	3231-29	Carriage Bolt	2
39	26-1680	Spindle Center	1
40	57-0280	Decal — 72"	1
41	26-1790	Spacer R.H. Spindle	1
*	23-2410	Blade — High Sail (Optional)	3

*Not Illustrated



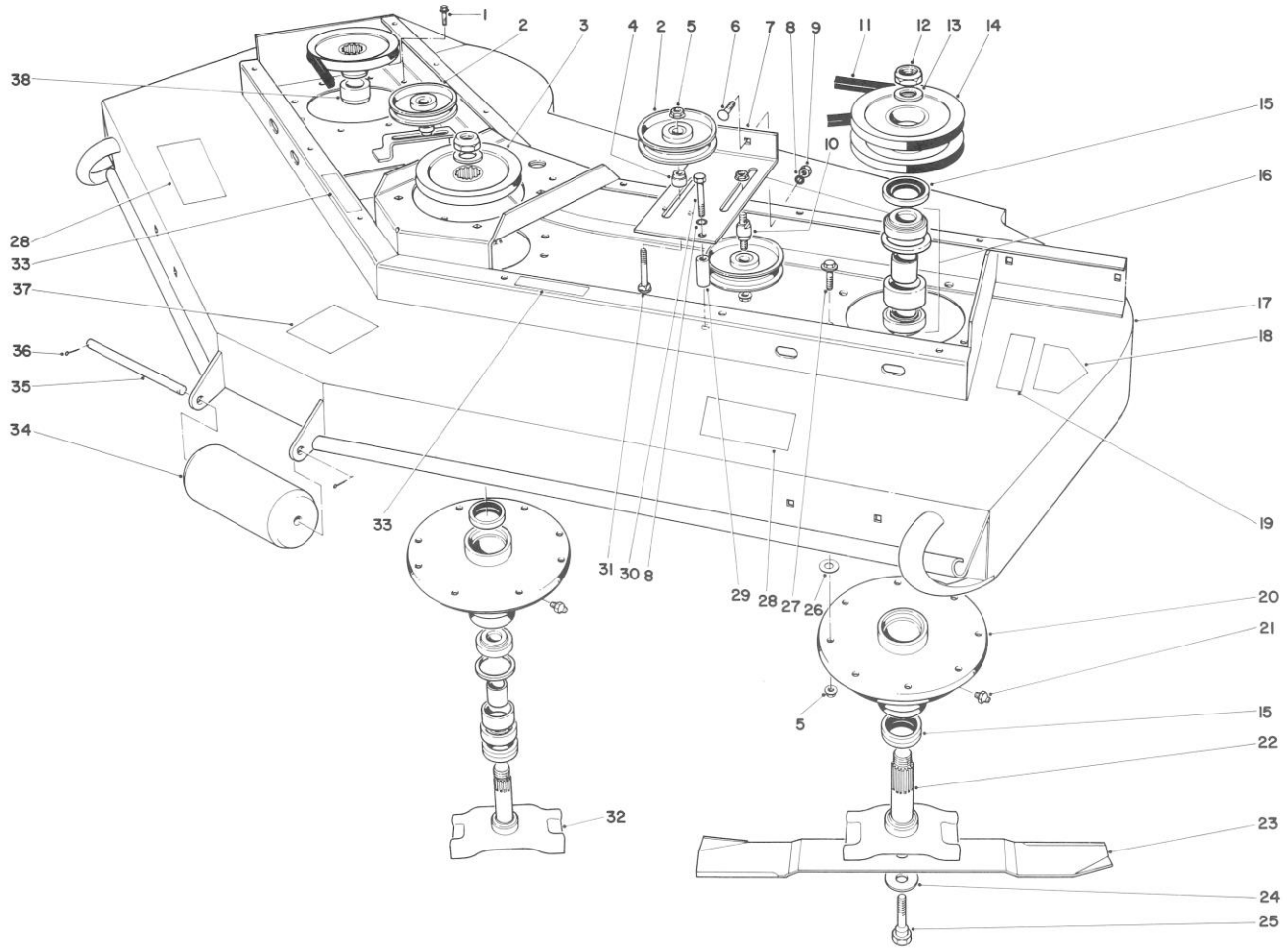
CUTTING UNIT MODEL 30721 (Continued)

Ref. No.	Part No.	Description	No. Used
1	26-1490	Caster Arm R.H. (Incl. Ref. #31)	1
2	324-12	Capscrew	4
3	3256-5	Flatwasher	4
4	26-1890	Cover — Deck R.H.	1
5	32153-2	Nut	4
6	63-8410	Washer	4
7	39-3340	Bracket — Caster Arm Clamp	1
8	3257-5	Key — Woodruff	1
9	26-1400	Pulley-Deck	1
10	63-1970	Shroud Universal	1
11	3253-21	Lockwasher	6
12	3217-7	Nut	2
13	21-3770	Lift Strap	1
14	3217-8	Nut	4
15	3253-6	Lockwasher	4
16	32104-82	Capscrew — Self Tapping	14
17	26-1900	Cover — Deck L.H.	1
18	3256-25	Flatwasher	2
19	3217-9	Nut	12
20	3253-7	Lockwasher	12
21	3256-26	Flatwasher	4
22	3233-2	Carriage Bolt	12
23	3296-23	Nut	4
24	39-7450	Bracket — Caster Arm Clamp	1
25	39-3330	Bar — Caster Clamp	2
26	325-14	Capscrew	4
27	3290-384	Lynch Pin — Safety Type	4
28	63-0070	Spacer 1/2"	24
29	28-9290	Bushing — Special	8

Ref. No.	Part No.	Description	No. Used
30	302-5	Grease Fitting	4
31	26-1430	Caster Arm L.H. (Incl. Ref. #31)	1
32	3-6781	Washer	4
33	26-1560	Caster Fork Rear	2
34	325-17	Capscrew	2
35	3256-6	Washer	8
36	62-5580	Bearing	8
37	63-1770	Spanner — Rear	2
38	302-11	Grease Fitting	2
39	63-8400	Caster Wheel — Rear (Incl. Ref. #38, 40 & 42)	2
40	63-8580	Roller Bearing	2
41	32153-5	Locknut	4
42	325-22	Capscrew	2
43	62-5570	Roller Bearing	2
44	302-40	Grease Fitting	2
45	62-4330	Caster Wheel — Front (Incl. Ref. #38, 42 & 45)	2
*†	54-8810	Pneumatic Tire & Wheel Assembly (Optional)	2
46	64-4340	Spanner — Front	2
47	26-1530	Caster Fork — Front	2
48	3231-27	Carriage Bolt	2
49	68-6810	Gear Case Assembly	1
50	3213-26	Carriage Bolt	4
51	68-9890	Cover — Gear Box Front	1
52	68-8560	Bracket — Gear Box	2
53	63-9750	Mount Isolation	4
54	323-4	Hex Hd. Capscrew	4
55	70-2560	Decal — Lube	1

*Not Illustrated

†See page 52 for pneumtic tire & wheel assembly.



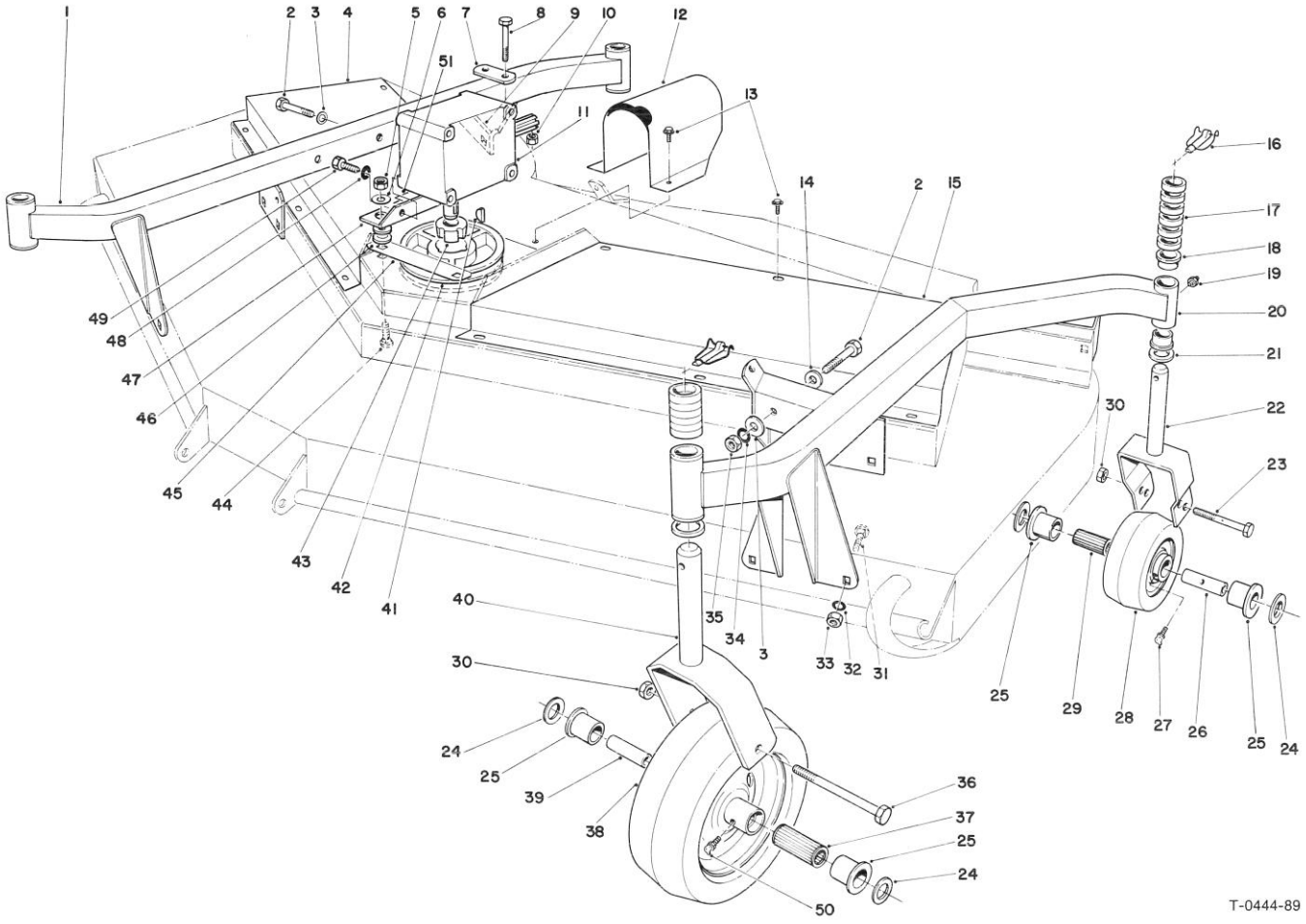
T-0443-89

CUTTING UNIT MODEL NO. 30710

Ref. No.	Part No.	Description	No. Used
1	3234-11	Hex Flange Screw	4
2	26-1840	Idler Pulley	3
3	26-1760	Pulley	2
4	26-1860	Spacer — Idler Pulley	2
5	32128-21	Flange Nut	31
6	3231-22	Carriage Bolt	2
7	26-1870	Idler Mount L.H.	1
8	3253-21	Lockwasher	3
9	3217-7	Nut	2
10	26-1850	Stud Idler	1
11	21-0890	V-Belt	3
12	3296-49	Nut	3
13	3-8514	Washer	3
14	26-9100	Pulley L.H.	1
15	253-138	Oil Seal	9
16	49-8320	Bearing Assembly w/Spacers (Matched Set)	3
17	38-9200	Cutter Deck	1
18	43-8480	Decal — Danger	2
19	68-7280	Decal — Blade Bolt Torque	1

Ref. No.	Part No.	Description	No. Used
20	60-9700	Spindle Housing	3
21	302-52	Grease Fitting	3
22	26-1690	Spindle Outer	2
23	29-5530	Blade	3
24	26-1990	Washer Belleville	3
25	26-1820	Capscrew	3
26	3256-24	Washer	A/R
27	3234-1	Hex Flange Screw	20
28	66-1340	Decal — Danger	2
29	26-1880	Spacer — Idler Mount	1
30	323-12	Capscrew	1
31	3231-29	Carriage Bolt	2
32	26-1680	Spindle Center	1
33	67-5360	Decal — Shield Missing	2
34	31-0750	Roller	1
35	32-9610	Roller Shaft	1
36	3272-11	Cotter Pin	2
37	57-0280	Decal — 72"	1
38	26-1790	Spacer R.H. Spindle	1
*	23-2410	Blade — High Lift (Optional)	3

*Not Illustrated



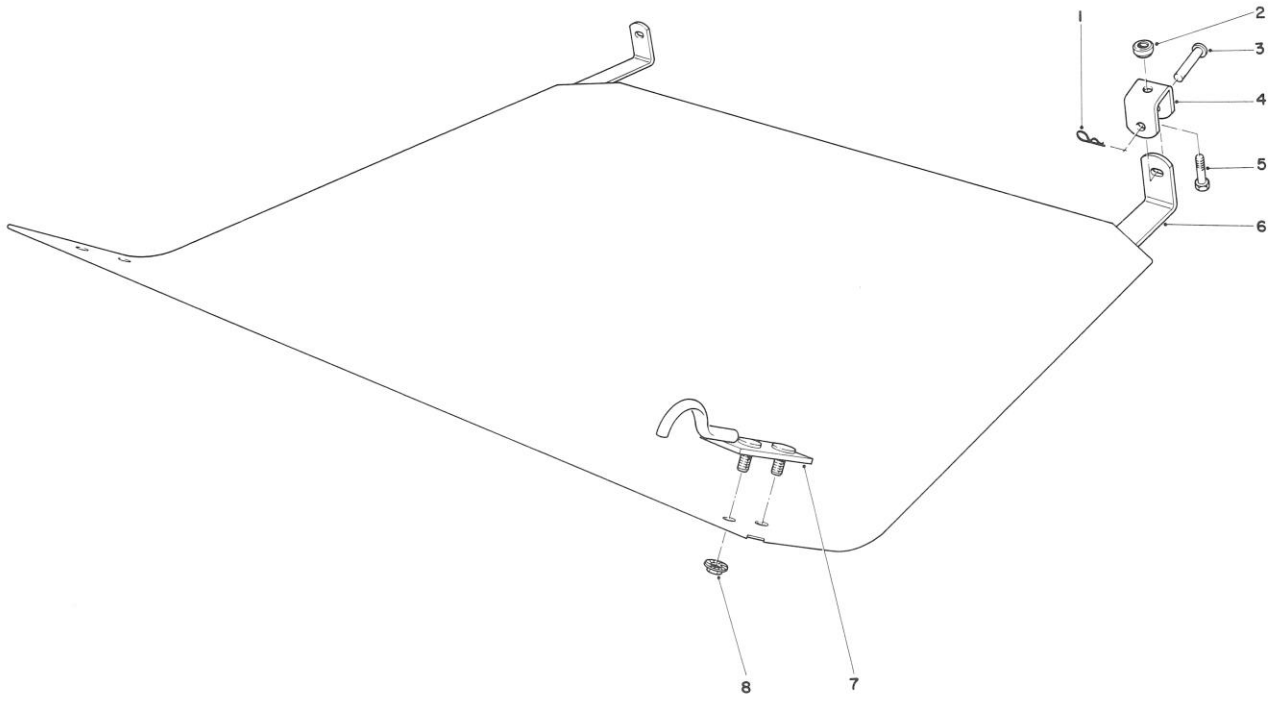
CUTTING UNIT MODEL NO. 30710 (Continued)

Ref. No.	Part No.	Description	No. Used
1	38-9370	Caster Arm R.H. (Incl. Ref. #22)	1
2	324-12	Capscrew	4
3	3256-5	Washer	4
4	26-1890	Cover Deck R.H.	1
5	32153-2	Nut	4
6	63-8410	Washer	4
7	39-3330	Bar — Castor Arm Clamp	1
8	325-14	Capscrew	2
9	39-3340	Bracket — Caster Arm Clamp	1
10	3296-23	Locknut	2
11	68-6810	Gear Box Assembly	1
12	63-1970	Shroud Universal	1
13	32104-82	Capscrew — Self Tapping	14
14	3256-25	Flat Washer	2
15	26-1900	Cover Deck L.H.	1
16	3290-384	Lynch Pin Safety Type	4
17	63-0070	Spacer 1/2"	24
18	28-9290	Bushing — Special	8
19	302-5	Grease Fitting	4
20	38-9420	Castor Arm L.H. (Incl. Ref. #22)	1
21	3-6781	Washer	4
22	26-1560	Caster Fork — Rear	2
23	325-17	Capscrew	2
24	3256-6	Washer	8
25	62-5580	Bushing	8
26	63-1770	Spanner — Rear	2
27	302-11	Grease Fitting	4
28	63-8400	Castor Wheel — Rear (Incl. Ref. #29, 31, & 33)	2

Ref. No.	Part No.	Description	No. Used
29	63-8580	Roller Bearing	2
30	32153-5	Locknut	4
31	3233-2	Carriage Bolt	12
32	3253-7	Lockwasher	12
33	3217-9	Nut	12
34	3253-6	Lockwasher	4
35	3217-8	Nut	4
36	325-22	Capscrew	2
37	62-5570	Roller Bearing	2
38	62-4330	Caster Wheel — Front (Incl. Ref. #25 & 29)	2
39	62-4340	Spanner — Front	2
40	26-1530	Caster Fork	2
41	3257-5	Key — Woodruff	1
42	26-1400	Pulley — Deck	1
43	23-1640	Bushing — Taper Lock	1
44	3231-26	Carriage Bolt	4
45	68-9890	Cover — Gear Box Front	1
46	63-9750	Mount Isolation	4
47	68-8560	Bracket — Gearbox	2
48	3253-21	Lockwasher	4
49	323-4	Hex. Hd. Capscrew	4
*†	54-8810	Pneumatic Tire & Wheel Assembly (Optional)	2
50	302-40	Grease Fitting	2
51	70-2560	Decal — Lube	1

*Not Illustrated

†See page 51 for pneumatic tire & wheel assembly.

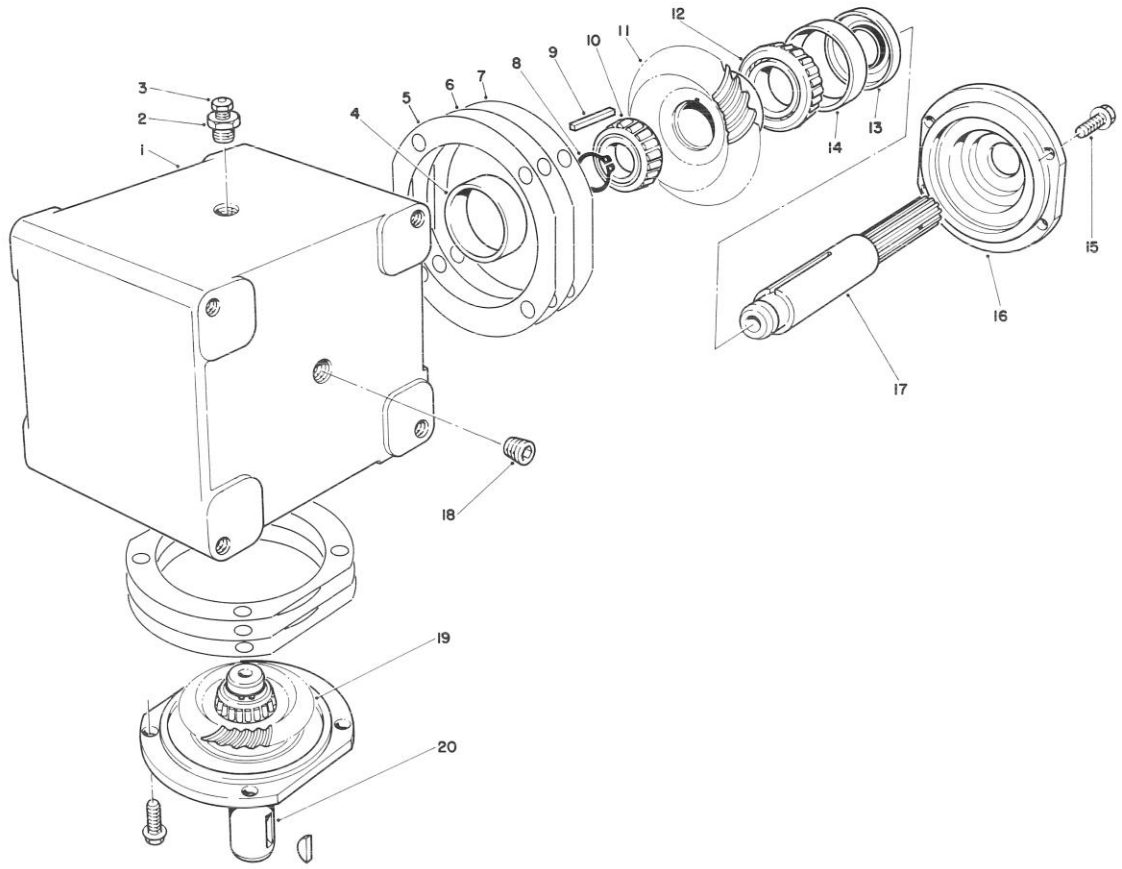


T-0445-89

CUTTING UNIT MODEL NO. 30710 (Continued)

Ref. No.	Part No.	Description	No. Used
1	3290-322	Hair Pin Cotter	2
2†	46-1600	Spacer	2
3	283-23	Clevis Pin	2
4	39-1470	Hanger – Belly Shield	2

Ref. No.	Part No.	Description	No. Used
5	323-7	Capscrew	2
6	39-1410	Belly Shield	1
7	39-1440	Belly Shield Hook	2
8	32128-20	Flange Nut	4

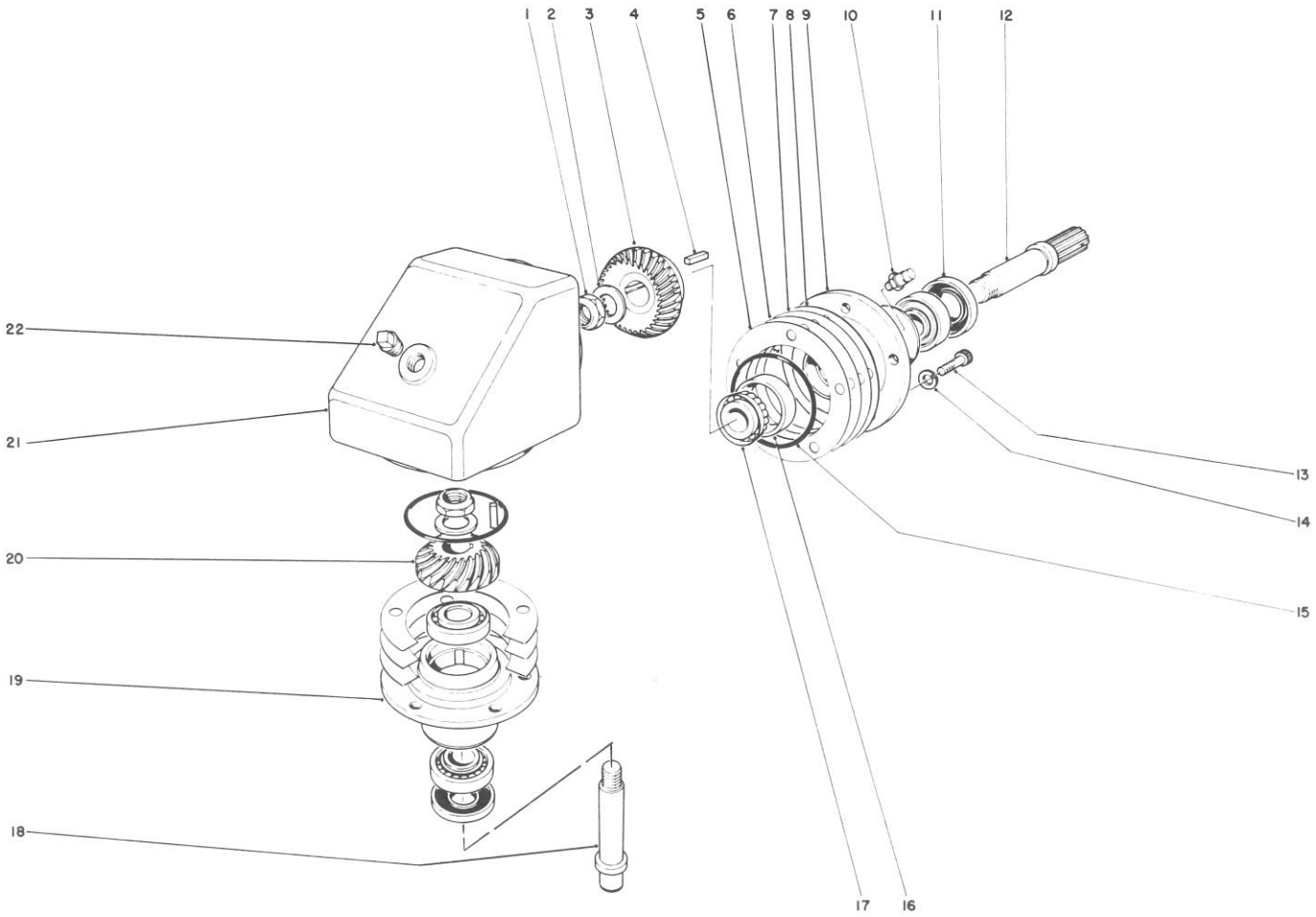


T-0211-89

GEAR BOX ASSEMBLY NO. 68-6810

Ref. No.	Part No.	Description	No. Used
1	68-7030	Housing	1
2	62 3550	Bushing — Reducer	1
3	62-3520	Valve — Pressure Relief	1
4	62-3370	Cup — Bearing	2
5	62-3420	Gasket (.015)	A/R
6	62-3430	Gasket (.005)	A/R
7	62-3440	Gasket (.003)	A/R
8	68-7070	Ring — Retaining	2
9	62-3380	Key	2
10	62-3360	Cone — Bearing	2

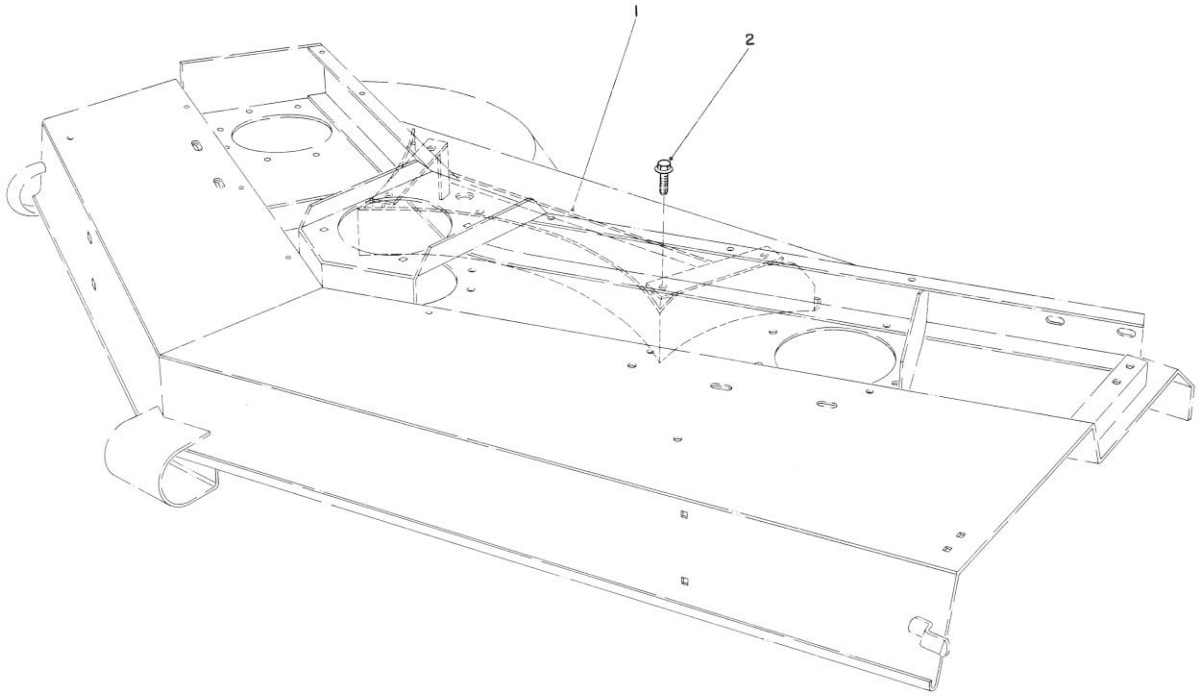
Ref. No.	Part No.	Description	No. Used
11	68-7080	Gear	1
12	62-3330	Cone — Gear	1
13	62-3400	Seal	2
14	62-3340	Cup — Bearing	2
15	62-3310	Screw — Sems, Cap	8
16	62-3410	Cap	2
17	~~68-7050~~	Shaft 68-7040	1
18	62-3490	Plug — Pipe (Solid)	1
19	68-7060	Gear	1
20	~~68-7040~~	Shaft 68-7050	1



GEAR BOX ASSEMBLY NO. 63-9870

Ref. No.	Part No.	Description	No. Used
1	3296-15	Nut	2
2	3-6514	Thrust Washer	2
3	26-1340	Gear — Spiral Bevel	1
4	18-6430	Square Key	2
5	26-1350	Shim .002 Thick Red	A/R
6	26-1360	Shim .005 Thick Blue	A/R
7	26-1370	Shim .015 Thick Pink	A/R
8	33-2040	Shim .020 Thick Yellow	A/R
9	26-1290	Bearing Housing — Input	1
10	302-14	Vent Plug	1
11	253-137	Oil Seal	2

Ref. No.	Part No.	Description	No. Used
12	26-1310	Shaft — Input	1
13	3274-7	Capscrew Socket Head	5
14	3253-21	Lockwasher	5
15	237-97	O-Ring	2
16	254-90	Bearing Cup	4
17	254-91	Bearing Cone	4
18	26-1320	Shaft — Output	1
19	26-1380	Bearing Housing — Output	1
20	26-1330	Pinion Spiral	1
21	26-1270	Gear Box	1
22	281-11	Pipe Plug Sq. Hd.	1



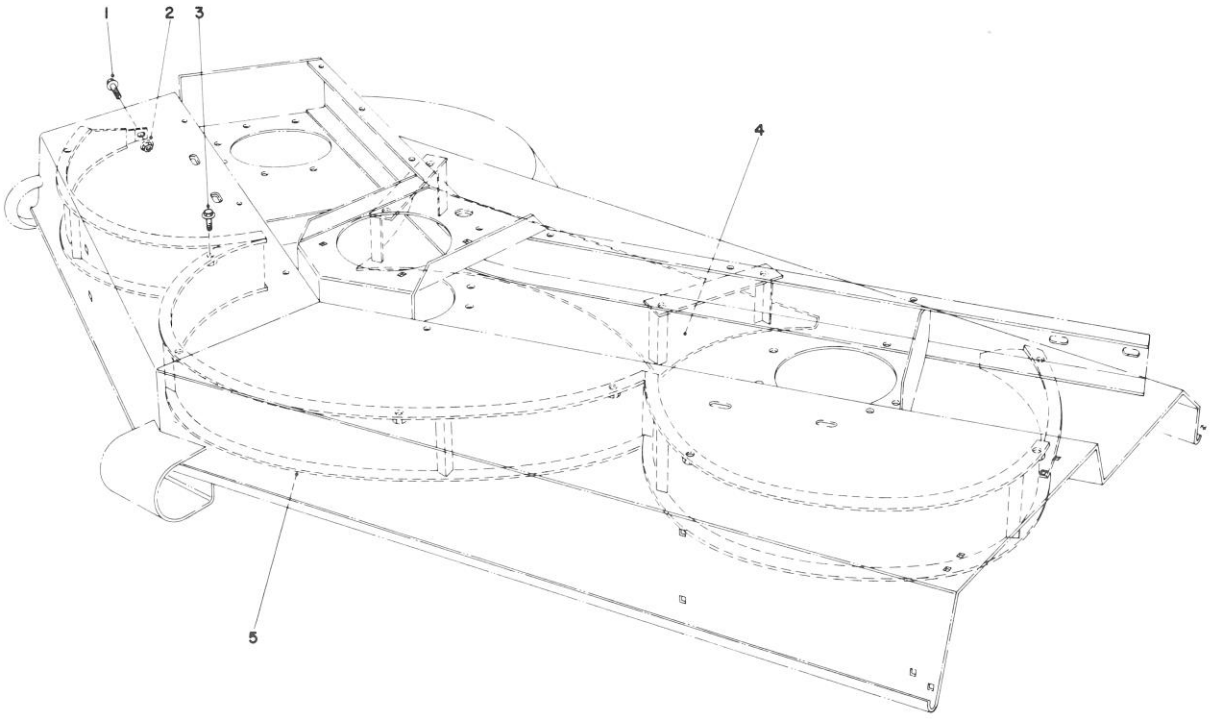
T-0446-89

REAR BAFFLE KIT MODEL NO. 51-1460 (Optional)

Ref. No.	Part No.	Description	No. Used
1		Rear Baffle	1

Ref. No.	Part No.	Description	No. Used
2	3234-1	Screw – Hex. Flange Locking	4

Note: Will not fit with Cutting Unit Model No. 30710.



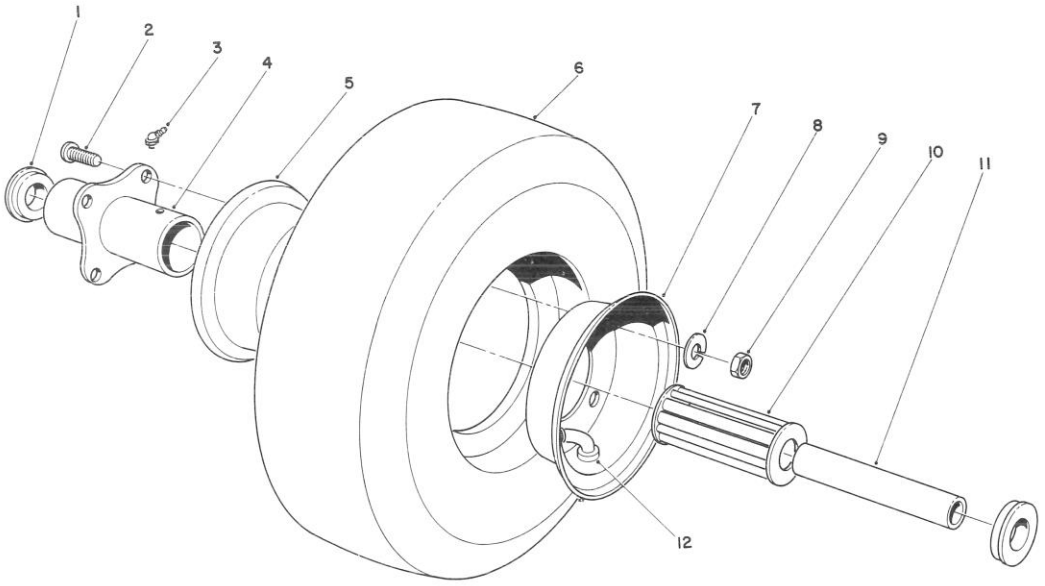
T-0447-89

MULCHER KIT MODEL NO. 30732 (Optional)

Ref. No.	Part No.	Description	No. Used
1	3234-11	Hex Flange Screw	1
2	32128-21	Flange Nut	13
3	3234-1	Hex Flange Screw	12

Ref. No.	Part No.	Description	No. Used
4	23-4190	Bottom Rear Shield	1
5	27-5430	Mulcher Screen	1

Note: Will not fit with Cutting Unit 30710.

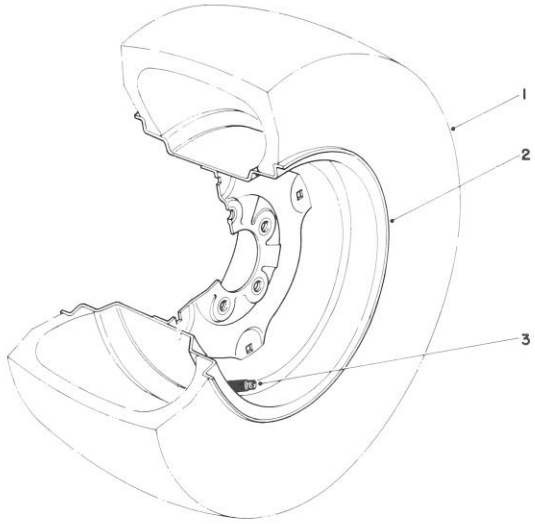


T-0448-89

CUTTING UNIT PNEUMATIC TIRE & WHEEL ASSEMBLY NO. 54-8810 (Optional)

Ref. No.	Part No.	Description	No. Used
1	54-8930	Retainer	2
2	54-8890	Bolt – Wheel	4
3	302-10	Fitting – Grease	1
4	54-8920	Hub – Centered	1
5	54-8910	Wheel Half – Female	1
6	54-8960	Tire	1

Ref. No.	Part No.	Description	No. Used
7	54-8900	Wheel Half – Male	1
8	3253-4	Washer – Lock	4
9	3217-6	Nut – Hex	4
10	54-8940	Bearing – Roller, Open Cage	1
11	55-7080	Bushing – Spanner	1
12	54-8950	Tube w/Valve	1



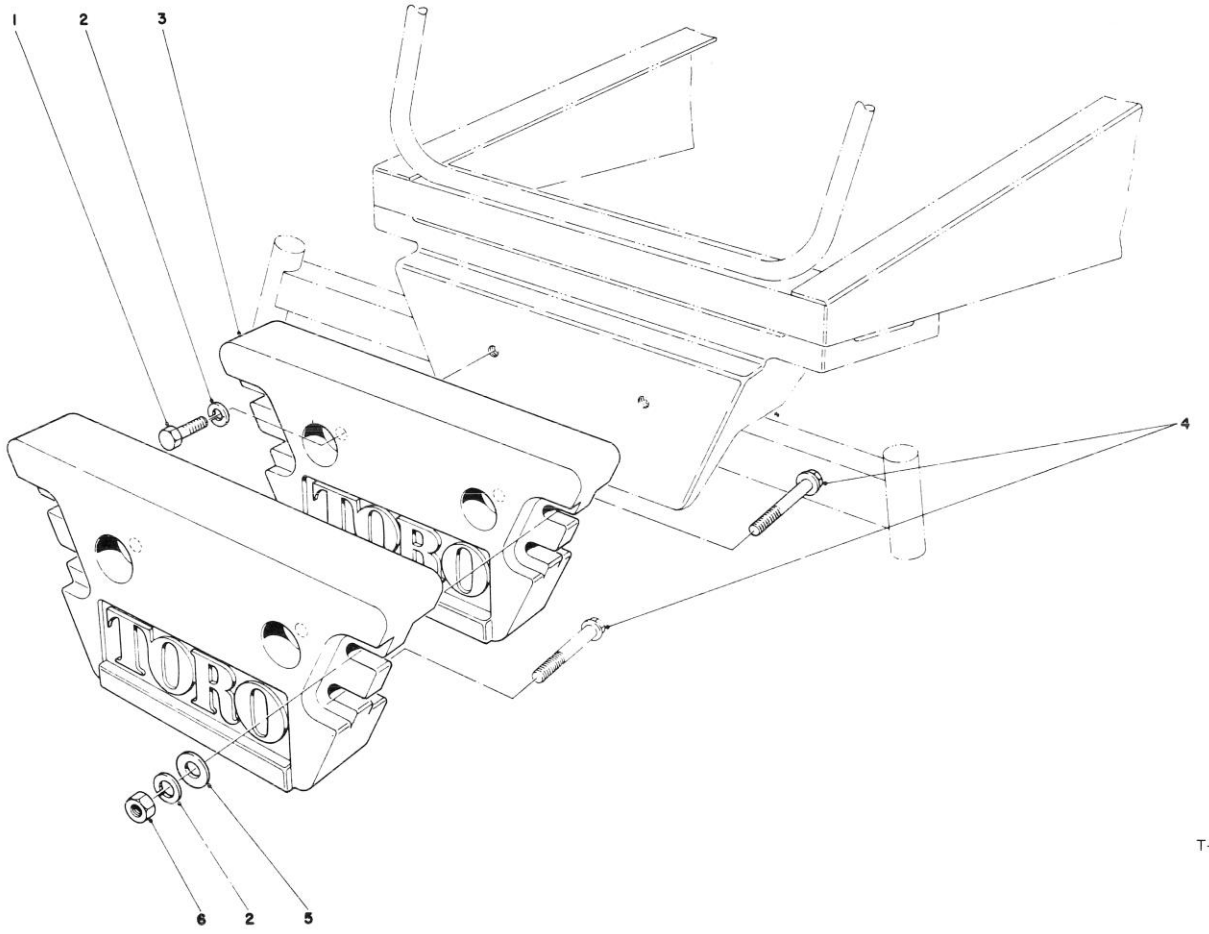
T-0449-89

TIRE & WHEEL ASSEMBLY 23 X 10.50 X 12 (Optional) NO. 62-7020

Ref. No.	Part No.	Description	No. Used
1	231-95	Tire	1
2	217-116	Rim	1

Ref. No.	Part No.	Description	No. Used
3	232-27	Valve Stem	1

Note: Will not fit with Cutting Unit 30710.

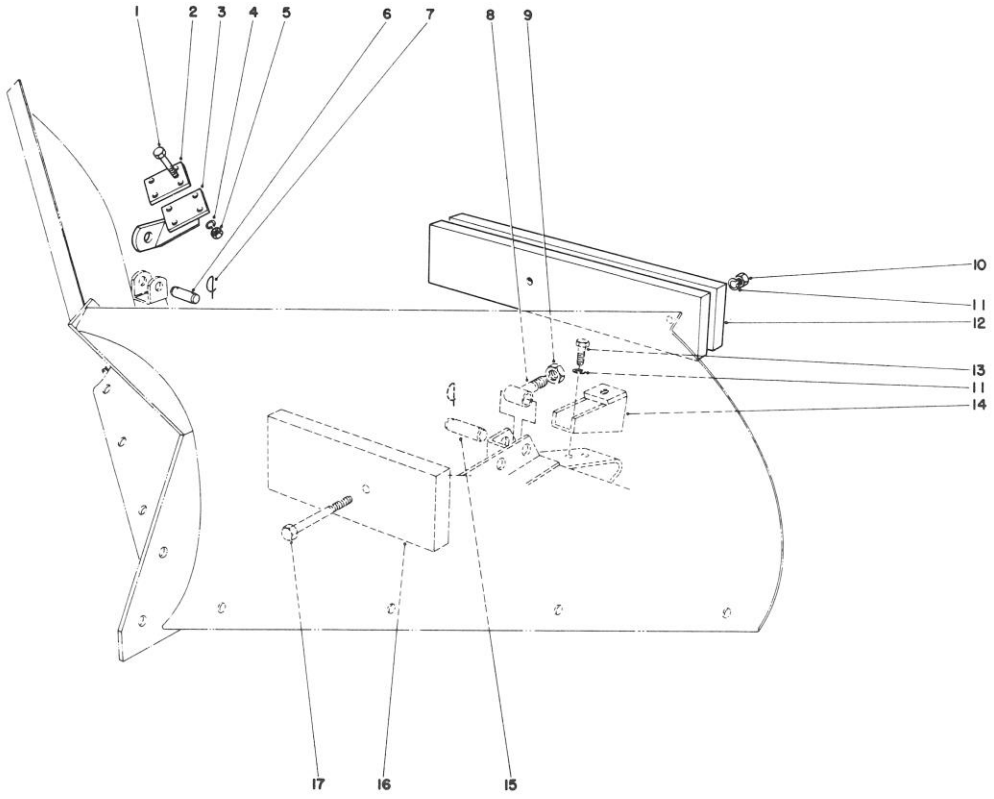


T-0427-89

REAR WEIGHT KIT MODEL NO. 24-5780 (Optional)

Ref. No.	Part No.	Description	No. Used
1	325-6	Capscrew	2
2	3253-7	Lockwasher	6
3	24-5790	Rear Weight	2

Ref. No.	Part No.	Description	No. Used
4	325-14	Capscrew	4
5	3256-26	Flat Washer	8
6	3217-9	Nut	4



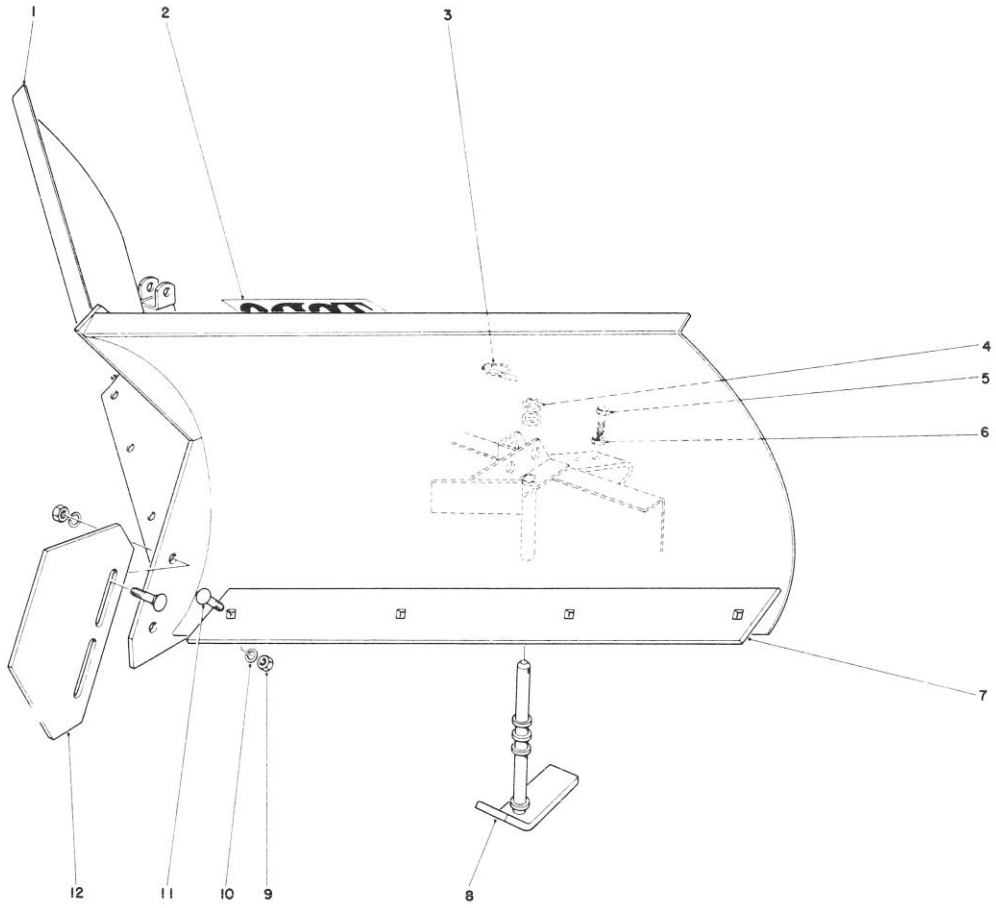
T-0451-89

V-PLOW INSTALLATION KIT MODEL NO. 30757 (Optional)

Ref. No.	Part No.	Description	No. Used
1	323-14	Capscrew	4
2	24-2690	Clamp Plate	1
3	24-2680	Push Arm Bracket	1
4	3253-21	Lockwasher	4
5	3217-7	Nut	4
6	5-3505	Pin	1
7	5-3126	Spring Pin	4
8	23-9930	Push Pin	1
9	21-3000	Jam Nut	1

Ref. No.	Part No.	Description	No. Used
10	3217-9	Nut	2
11	3253-7	Lockwasher	4
12	24-2660	Outside Weight	2
13	325-4	Capscrew	2
14	24-2630	Stop	1
15	25-1350	Pin	1
16	24-2670	Inside Weight	2
17	325-22	Capscrew	2
*	11-0390	Chains (1 Pair)	1

*Not Illustrated

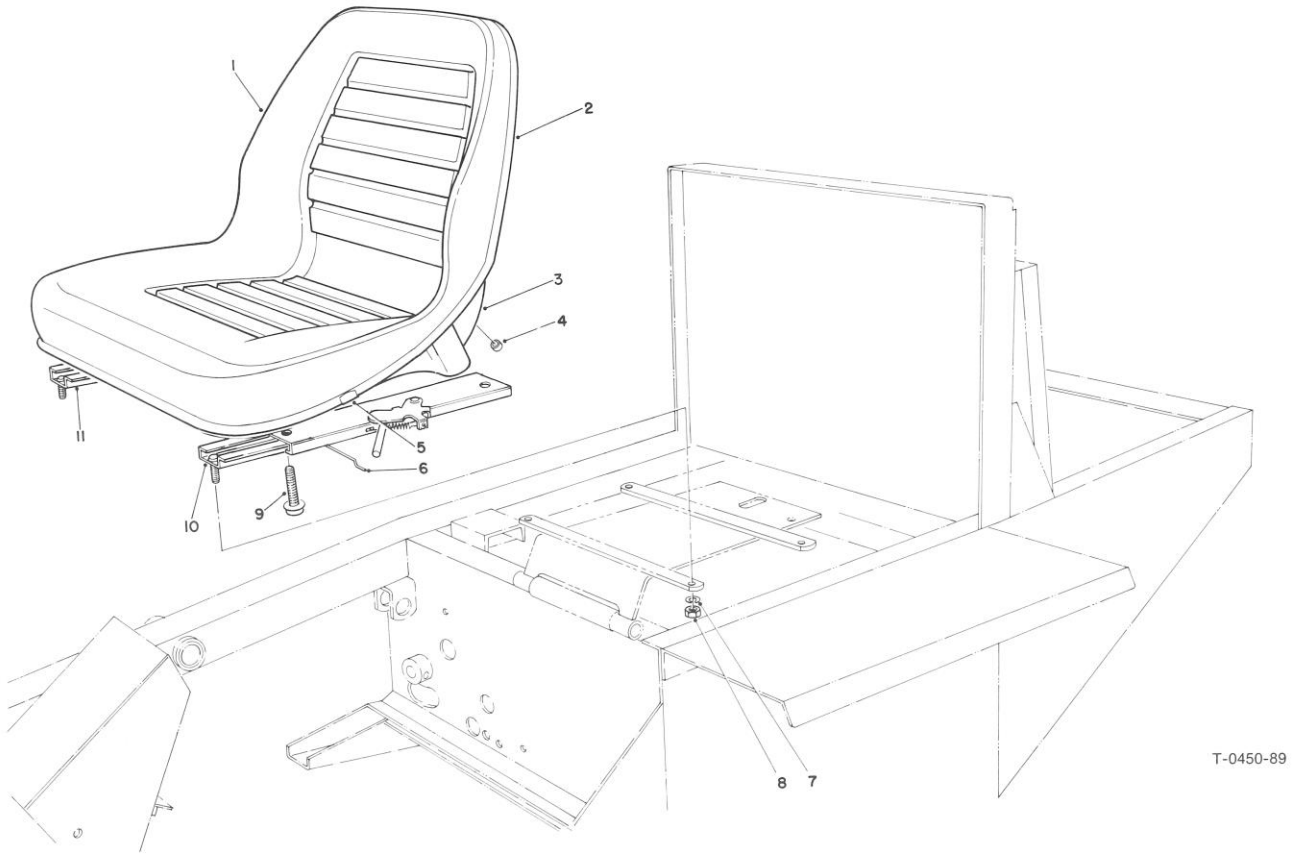


T-0452-89

V-PLOW MODEL NO. 30750 (Optional)

Ref. No.	Part No.	Description	No. Used
1	23-9960	V-Plow	1
2	66-6140	Decal	1
3	3290-243	Lynch Pin	2
4	20-4370	Spacer Tubes	10
5	325-6	Capscrew	1
6	3218-5	Jam Nut	1

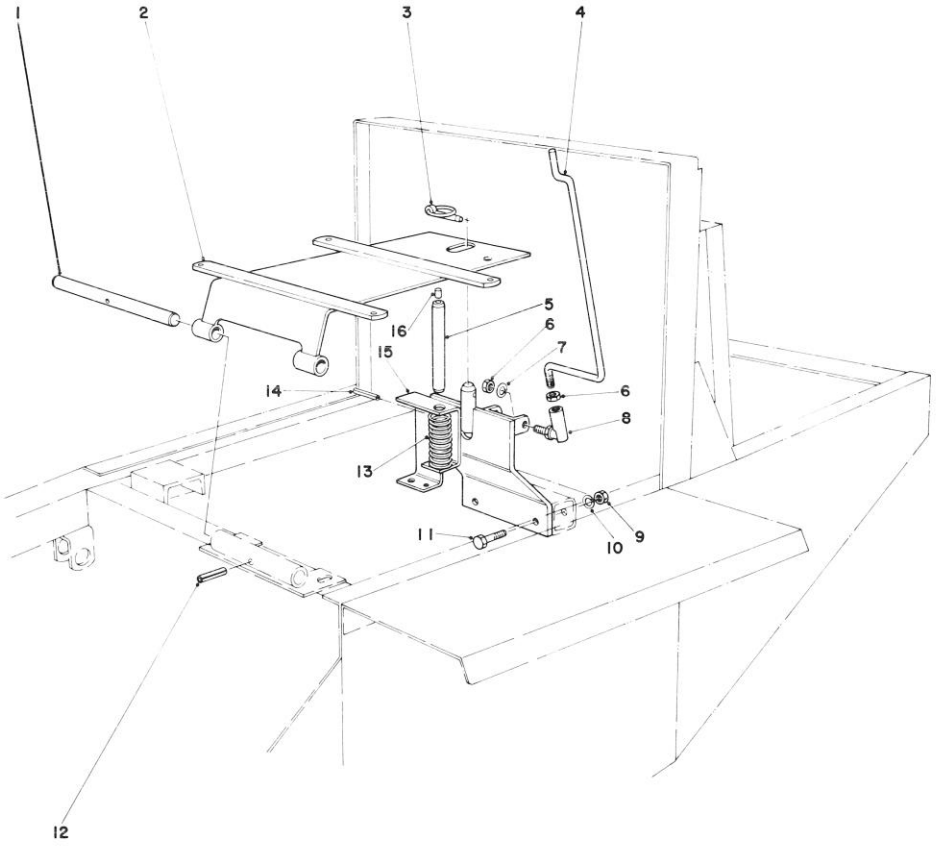
Ref. No.	Part No.	Description	No. Used
7	24-5570	Scraper Blade	2
8	24-5540	Skid	2
9	3217-9	Nut	10
10	3253-7	Lockwasher	10
11	3233-2	Carriage Bolt	10
12	24-5530	Nose Skid	1



STANDARD SEAT KIT MODEL NO. 30770

Ref. No.	Part No.	Description	No. Used
1		Cushion	1
2		Trim	1
3		Base	1
4		Grommet	1
5		Clip	1
6	52-4890	Rod — Connecting	1
7	3253-4	Lockwasher	4
8	3217-6	Nut	4
9	3234-5	Hex Flange Hd. Capscrew	4
10	51-0790	Adjuster — L.H.	1
11	52-4880	Adjuster — R.H.	1
*	66-5400	Seat Assembly (Incl. Ref. #1-5)	1

*Not Illustrated

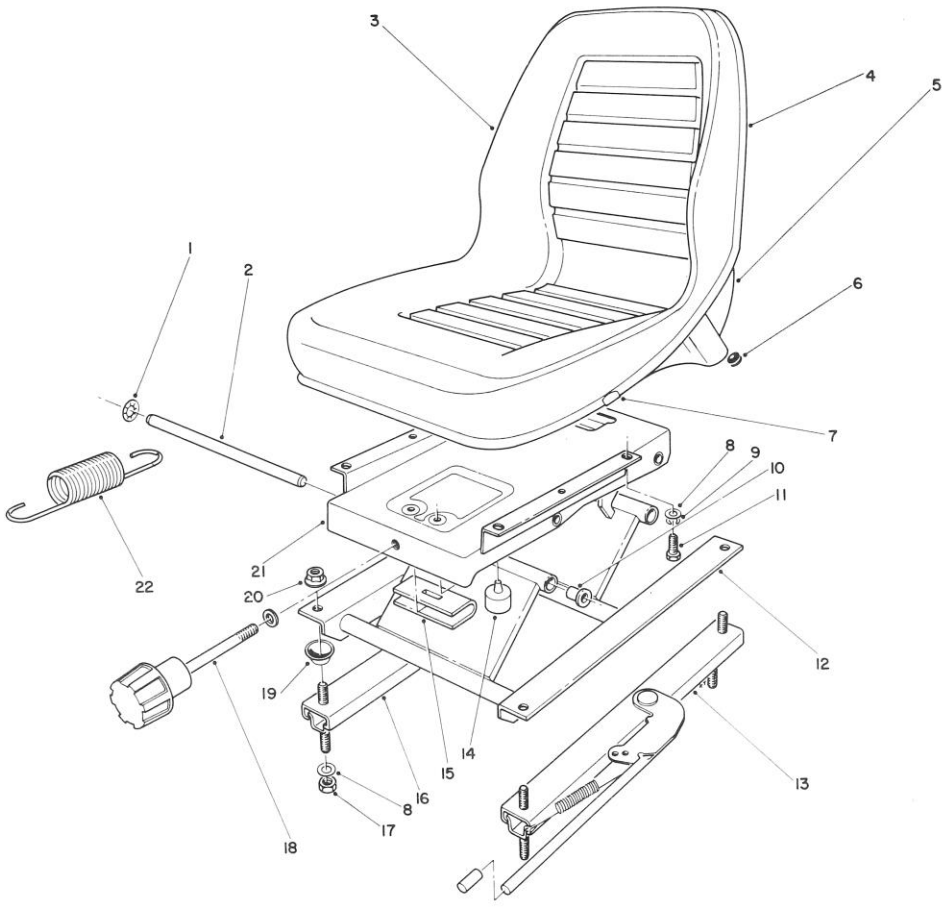


T-0453-89

STANDARD SEAT KIT MODEL NO. 30770 (Continued)

Ref. No.	Part No.	Description	No. Used
1	27-4720	Shaft	1
2	36-7550	Seat Support	1
3	3290-243	Lynch Pin	1
4	37-9580	Seat Prop	1
5	27-9870	Pin – Seat Switch	1
6	3220-2	Jam Nut	2
7	3253-24	Lockwasher	1
8	37-9570	Ball Joint	1

Ref. No.	Part No.	Description	No. Used
9	3217-7	Nut	2
10	3253-21	Lockwasher	2
11	323-12	Capscrew	2
12	32121-4	Spring Pin	1
13	28-0570	Spring Compression	1
14	32121-6	Spring Pin	1
15	27-9830	Seat Support Bracket	1
16	28-6180	Pin – Plastic	1



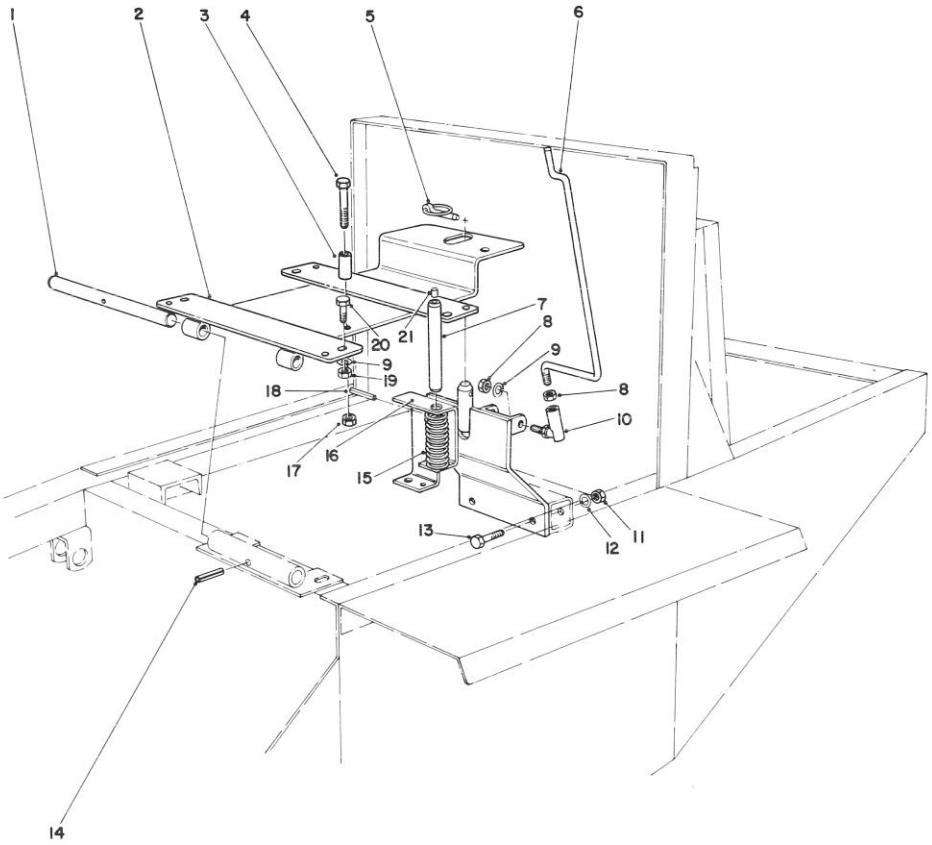
T-0454-89

DELUXE SEAT KIT MODEL NO. 30772

Ref. No.	Part No.	Description	No. Used
1	66-8560	Nut — Push	4
2	66-8550	Shaft — Pivot	2
3		Cushion — Seat	1
4		Trim — Seat	1
5		Base — Seat	1
6		Grommet	1
7		Cup	1
8	3256-2	Washer — Flat	8
9	3253-4	Lockwasher	4
10	66-8580	Bearing — Flange	4
11	322-3	Hex Hd. Capscrew	4
12	66-8610	Frame — Lower	1

Ref. No.	Part No.	Description	No. Used
13	66-8510	Adjuster w/Handle	1
14	66-8520	Bumper — Stop	2
15	66-8540	Hanger — Spring	1
16	66-8530	Adjuster	1
17	3296-29	Hex Nut	4
18	66-8590	Knob — Adjustment	1
19	66-9290	Spacer — Suspension	4
20	32128-25	Flange Locknut	4
21	66-8600	Frame — Upper	1
22	66-8570	Spring — Extension	2
*	66-5400	Seat Assembly (Incl. Ref. #3-7)	1

*Not Illustrated

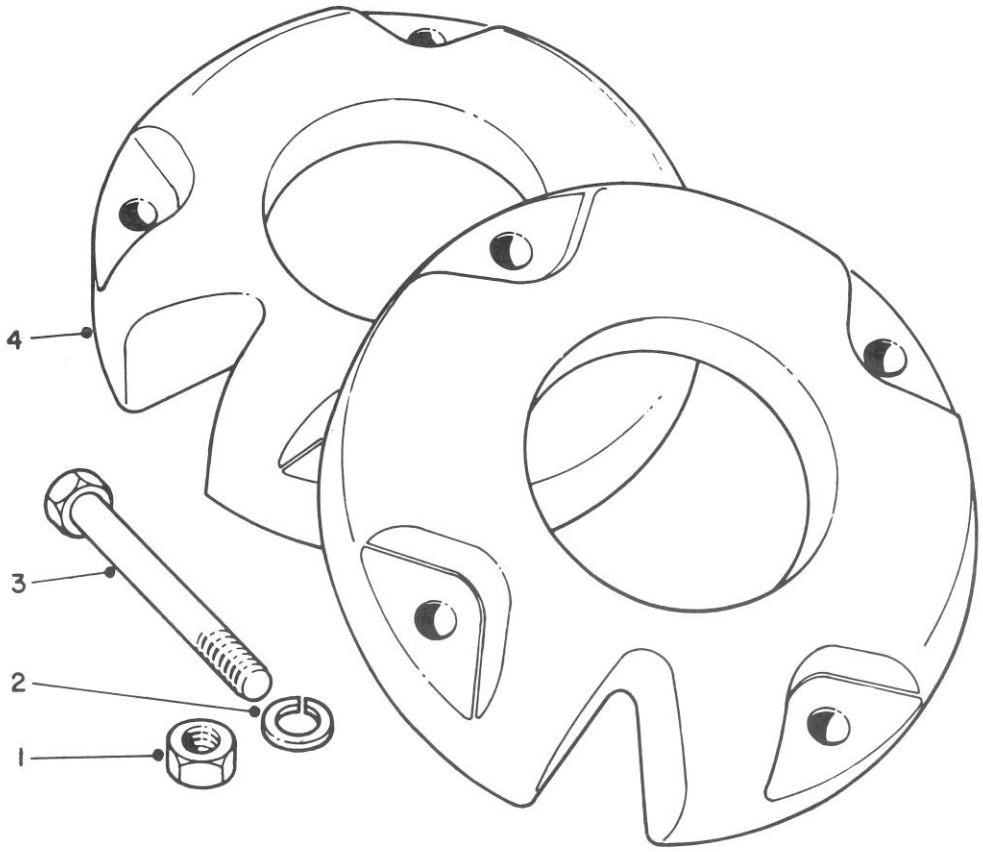


T-0212-89

DELUXE SEAT ADAPTER KIT MODEL NO. 30791

Ref. No.	Part No.	Description	No. Used
1	27-4720	Shaft	1
2	67-9860	Support — Seat	1
3	67-9210	Spacer	1
4	322-10	Hex Hd. Capscrew	1
5	3290-243	Lynch Pin	1
6	37-9580	Prop — Seat	1
7	27-9870	Pin — Seat Switch	1
8	3220-2	Jam Nut	2
9	3253-24	Lockwasher	5
10	37-9570	Ball Joint	1
11	3217-7	Nut	2

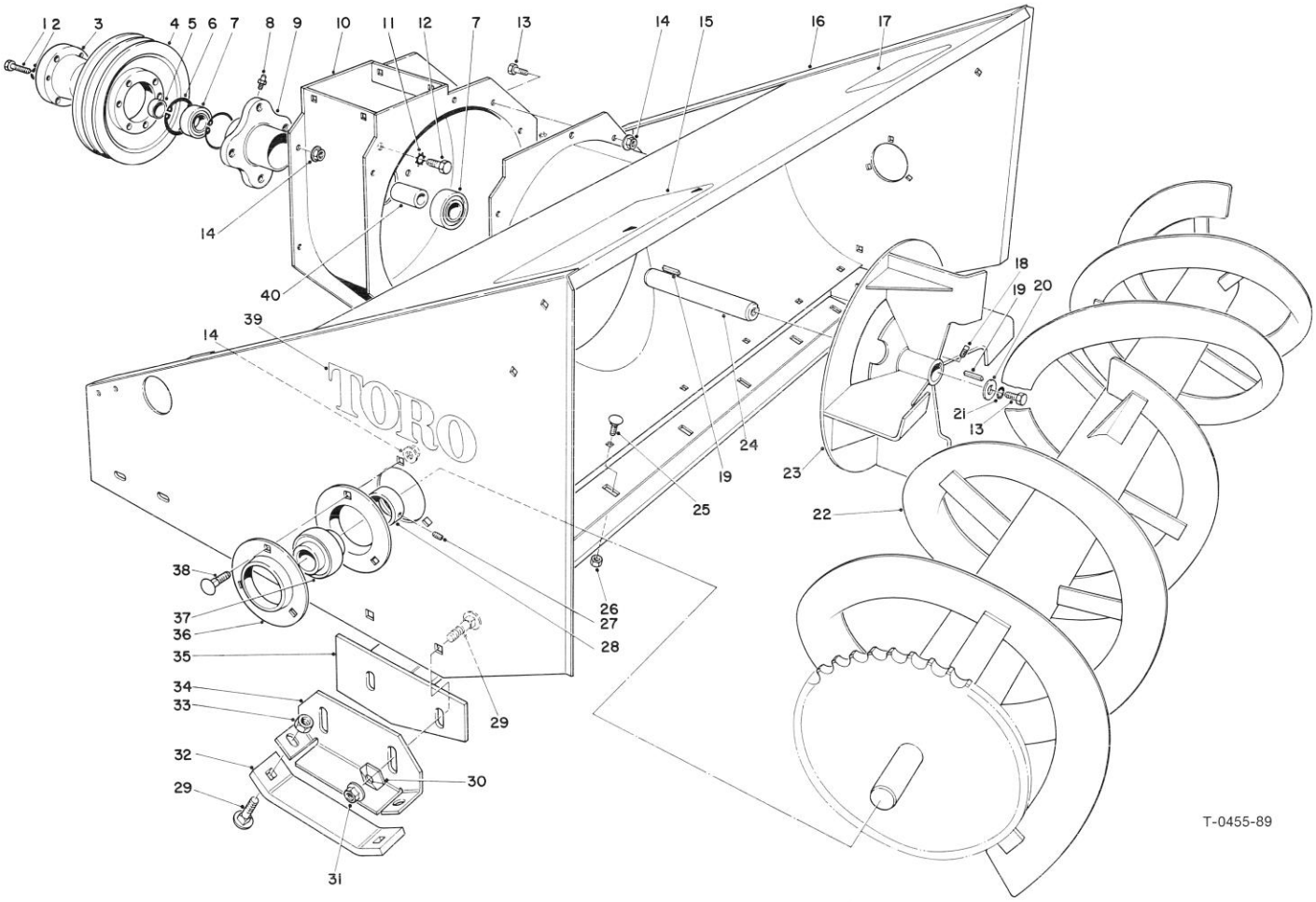
Ref. No.	Part No.	Description	No. Used
12	3253-21	Lockwasher	2
13	323-12	Hex Hd. Capscrew	2
14	32121-4	Pin — Spring	1
15	37-9590	Spring — Compression	1
16	27-9830	Bracket — Seat Support	1
17	32146-5	Locknut	1
18	32121-6	Pin — Spring	1
19	3217-6	Nut	4
20	322-4	Hex Hd. Capscrew	4
21	28-6180	Pin — Plastic	1



T-0457-89

WHEEL WEIGHTS MODEL NO. 11-0440 (Optional)

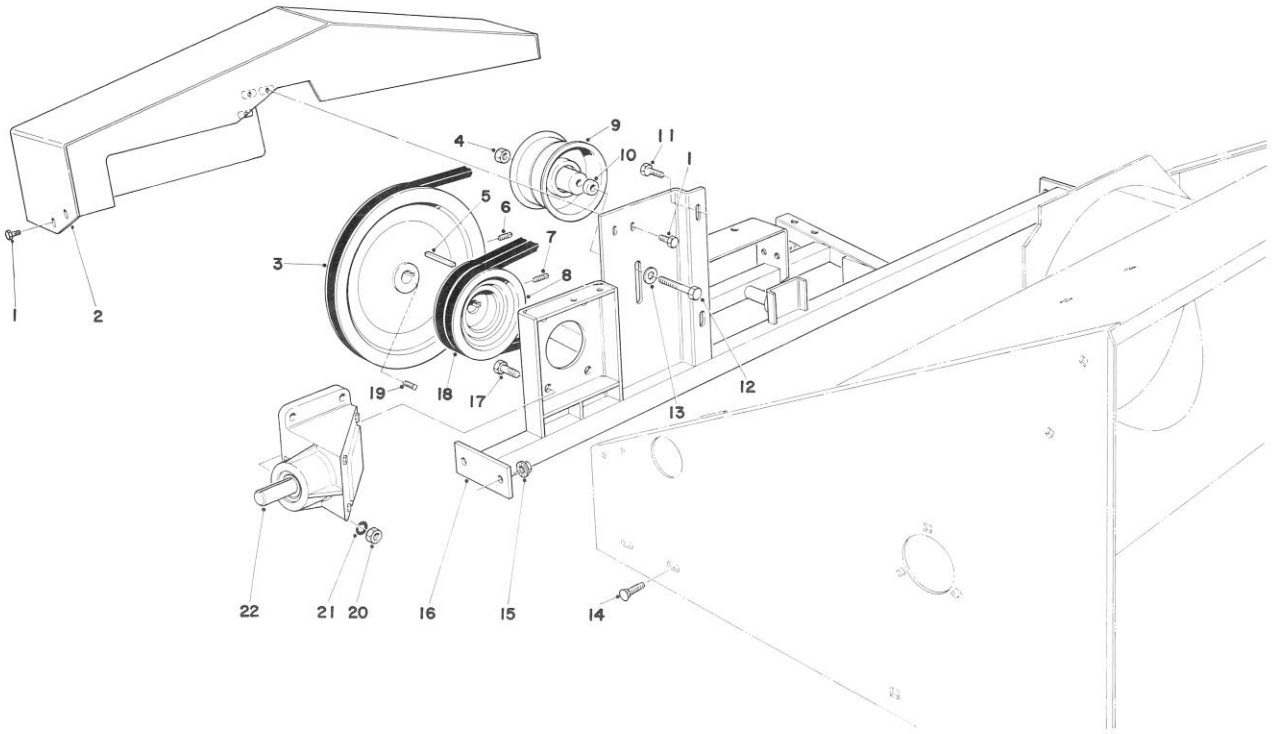
Ref. No.	Part No.	Description	No. Used
1	3218-5	Nut	8
2	3253-7	Lockwasher	8
3	325-14	Capscrew	8
4	7-2111	Wheel Weight	2



48" SNOWTHROWER MODEL NO. 30570 (Optional)

Ref. No.	Part No.	Description	No. Used
1	321-13	Screw, Cap Hex Hd.	3
2	3253-3	Lockwasher	3
3	46-3650	Hub – "QD" (Incl. Ref. #1 & 2)	1
4	46-3640	Pulley – "QD"	1
5	37-5170	Spacer	1
6	32151-20	Snap Ring	2
7	251-276	Bearing	2
8	302-11	Grease Fitting	1
9	32-4950	Housing Spindle	1
10	39-5030	Blower Housing	1
11	3255-2	Lockwasher	4
12	3213-20	Capscrew	4
13	322-3	Capscrew	9
14	32128-20	Flange Nut	16
15	46-5860	Decal – Rear Weight	1
16	39-5010	Auger Housing	1
17	29-6350	Decal – Warning	1
18	3243-1	Square Head Setscrew	2
19	31-0700	Square Key	2
20	3-6715	Flat Washer	1

Ref. No.	Part No.	Description	No. Used
21	3253-4	Lockwasher	1
22	32-6140	Auger	1
23	32-6130	Impeller	1
24	37-5240	Shaft – Impeller	1
25	3230-19	Carriage Bolt	7
26	3296-47	Locknut	7
27	3245-1	Set Screw	2
28	251-77	Locking Collar	2
29	3231-2	Carriage Bolt	8
30	3290-224	Pyramidal Lockwasher	4
31	32128-18	Flange Nut	4
32	37-5110	Skid – Shoe	2
33	32152-2	Locknut	4
34	37-4950	Skid – Mount Plate	2
35	37-5380	Scraper	1
36	251-287	Flange	4
37	251-253	Bearing (Incl. Ref. #27 & 28)	2
38	3230-18	Carriage Bolt	6
39	27-4600	Decal – Toro	2
40	31-0540	Sleeve	1



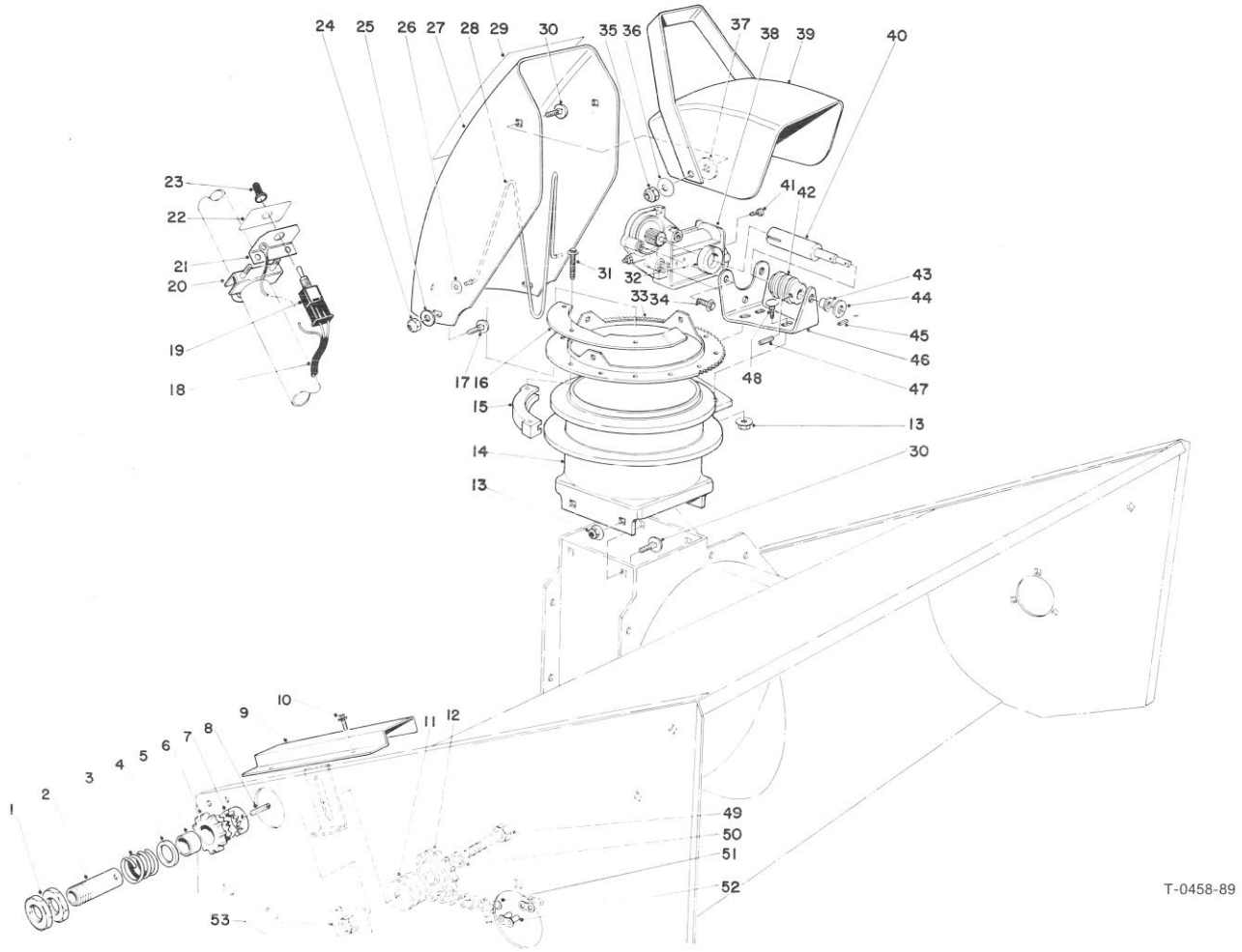
T-0456-89

48" SNOWTHROWER MODEL NO. 30570 (Optional) (Continued)

Ref. No.	Part No.	Description	No. Used
*1	3234-13	Flange Screw	4
*2	39-4560	Belt Shield	1
3	32-4480	Sheave	1
4	32152-2	Locknut	1
5	3-0971	Key	1
6	3242-2	Sq. Hd. Setscrew	1
7	3242-6	Sq. Hd. Setscrew	2
8	37-5090	Pulley – Gear Box	1
9	37-5760	Idler Pulley	1
10	37-5210	Spacer – Idler	1
11	322-3	Capscrew	2

Ref. No.	Part No.	Description	No. Used
12	323-11	Capscrew	1
13	3256-3	Flatwasher	1
14	3231-30	Carriage Bolt	4
15	3290-357	Hex Locknut	4
16	37-5400	Cross Brace	1
17	323-7	Capscrew	4
18	37-5670	V-Belt (Matched Set of 2)	1
19	3242-4	Sq. Hd. Setscrew	1
20	3217-7	Hexnut	4
21	3253-21	Lockwasher	4
22	37-5410	Gear Box Assembly	1

*Included in Adapter Kit Model No. 30571.



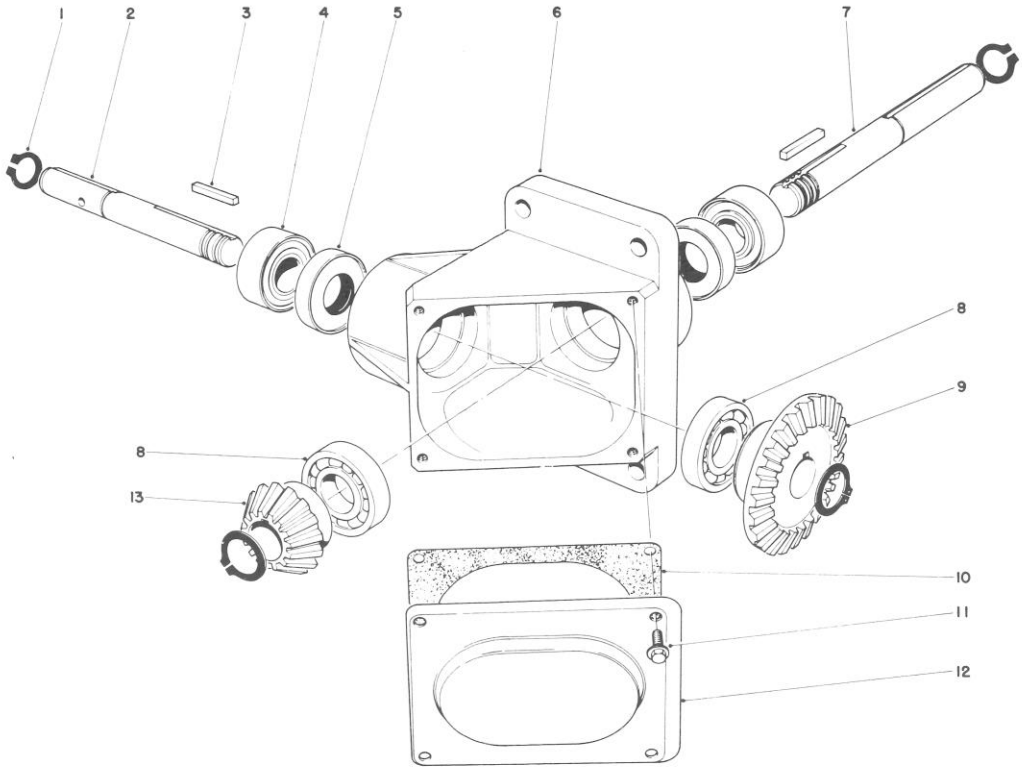
48" SNOWTHROWER MODEL NO. 30570 (Optional) (Continued)

Ref. No.	Part No.	Description	No. Used
1	37-5720	Nut – Thin	2
2	37-5700	Clutch Sleeve	1
3	37-5710	Spring Compression	1
4	37-3830	Spacer	1
5	37-5730	Bushing	1
6	37-5680	Clutch Sprocket	1
7	37-5690	Clutch Collar	1
8	32121-34	Roll Pin	1
9	32-1620	Chain Cover	1
10	32104-76	Self-Tapping Screw	2
11	3256-7	Flatwasher	3
12	30-0090	Idler Sprocket	1
13	3290-357	Locknut	7
14	39-4870	Chute Transition	1
15	25-5450	Swivel Block	6
16	39-4900	Stop-Chute Rotator	1
17	3230-18	Carriage Bolt	3
18	39-4990	Wire Harness	1
19	6-1659	Toggle Switch (Incl. Ref. #23)	1
†20	2112-9	Clamp	1
21		Toggle Switch Mount	1
22	39-4970	Decal – Chute Rotation	1
23	218-473	Toggle Switch Boot	1
24	3296-47	Locknut	3
25	3256-23	Flatwasher	3
26	3290-326	Pushnut	2
27	25-5440	Upper Chute	1
28	12-2040	Chute Wire	1

Ref. No.	Part No.	Description	No. Used
29	29-6350	Decal – Warning	1
30	3231-27	Carriage Bolt	6
31	27-0220	Special Screw	12
32	39-4940	Collar	1
33	39-4890	Ring – Chute Swivel	1
34	3234-13	Flange Screw	3
35	32152-2	Locknut	2
36	3290-340	Belleville Washer	2
37	20-4320	Rubber Washer	2
38	39-4920	Gearmotor	1
39	11-7120	Deflector	1
40	39-4930	Shaft – Worm Gear	1
41	3274-26	Socket Head Screw	1
42	8-8600	Worm Gear	1
43	256-255	Bushing	1
44	3256-1	Flatwasher	2
45	32121-20	Roll Pin	1
46	39-4910	Motor Mount	1
47	32121-50	Roll Pin	1
48	3231-2	Carriage Bolt	3
49	327-6	Capscrew	1
50	3253-8	Lockwasher	1
51	30-0160	Chain – Roller	1
52	2710-11	Connecting Link	1
53	30-0450	Nut Plate	1
*	37-5640	Slip Clutch (Incl. Ref. #1-8)	1
*	39-4950	Toggle Switch Assembly (Incl. Ref. #19 & 21-23)	1

*Not Illustrated

†Included in Adaptor Kit Model No. 30571.

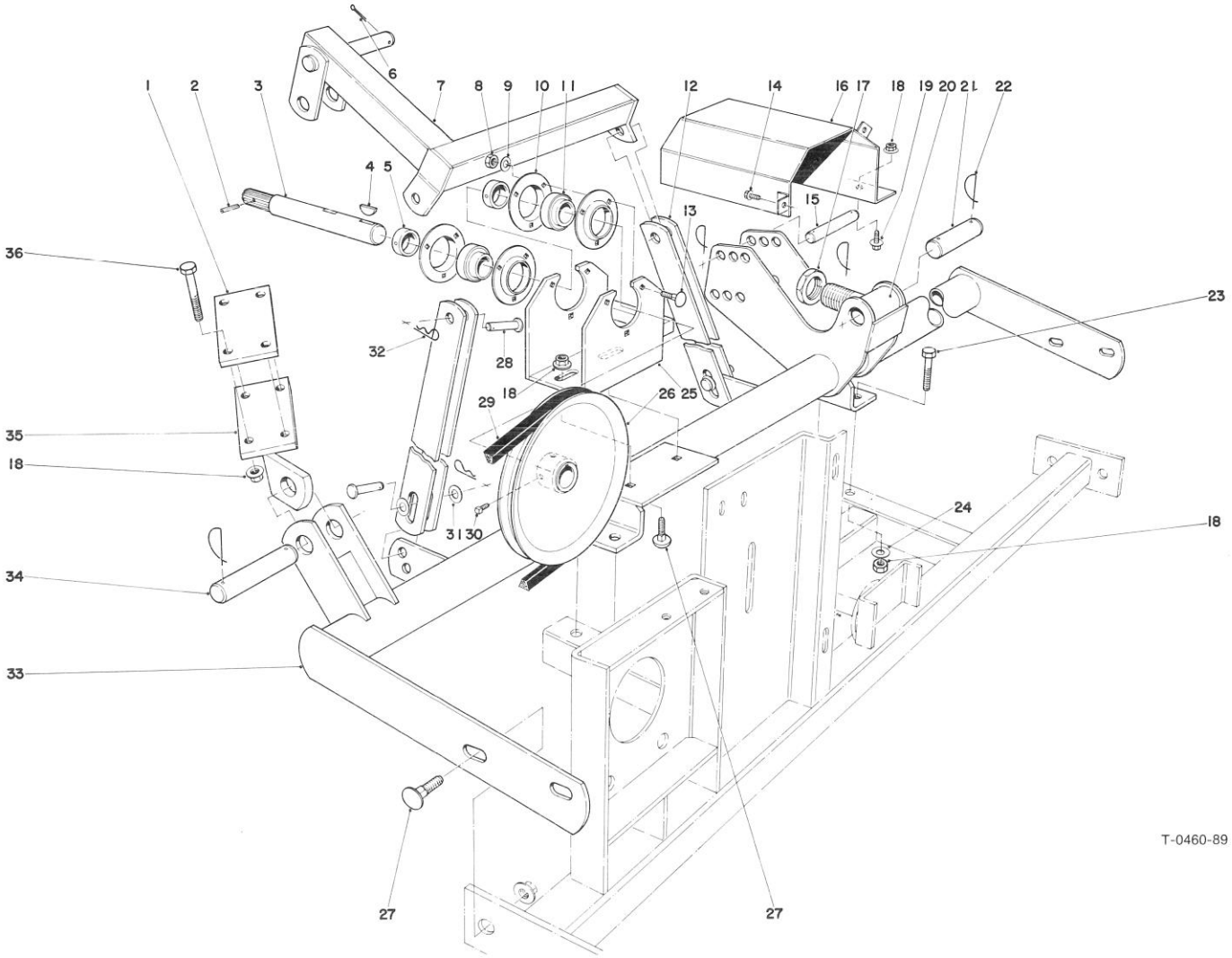


T-0459-89

48" SNOWTHROWER MODEL NO. 30570 (Optional) (Continued)

Ref. No.	Part No.	Description	No. Used
1	32120-72	Retaining Ring	4
2	30-0590	Shaft	1
3	30-0660	Key	2
4	30-0630	Bearing	2
5	30-0640	Oil Seal	2
6	30-0650	Housing	1
7	37-5840	Shaft	1

Ref. No.	Part No.	Description	No. Used
8	30-0620	Bearing	2
9	30-0670	Gear	1
10	30-0680	Gasket – Cover Plate	1
11	12-3270	Screw Special	4
12	30-0690	Cover Plate	1
13	30-0600	Gear	1



ADAPTER KIT 48" SNOWTHROWER MODEL NO. 30571 (Optional)

Ref. No.	Part No.	Description	No. Used
1	24-2690	Clamp Plate	1
2	32121-9	Roll Pin	1
3	39-4370	Jackshaft	1
4	3257-8	Key – Woodruff	1
5	251-77	Collar	2
6	3272-33	Cotter Pin	1
7	39-4310	Lift Arm	1
8	3217-6	Hex Nut	6
9	3253-24	Lockwasher	6
10	251-287	Flange – 3 Hole	4
11	251-253	Bearing (Incl. Ref. #5)	2
12	39-4340	Strap – Lift	4
13	3230-2	Carriage Bolt	6
14	3234-13	Flange Screw	4
15	39-4350	Pin	2
16	39-4600	Power Take Off Shield	1
17	21-3000	Jam Nut	1
18	3290-357	Flange Nut	11
19	3234-12	Flange Screw	1

Ref. No.	Part No.	Description	No. Used
20	23-9930	Push Pin	1
21	25-1350	Pin	1
22	5-3126	Spring Pin	8
23	323-12	Capscrew	4
24	29-4730	Washer	4
25	37-5610	Jackshaft Support	1
26	39-4380	Pulley	1
27	3231-2	Carriage Bolt	6
28	283-42	Clevis Pin	4
29	39-4390	V-Belt	1
30	3242-2	Square Head Setscrew	2
31	3256-24	Washer	4
32	3290-255	Hair Pin	4
33	39-4220	Hitch Adapter	1
34	5-3505	Pin	1
35	24-2680	Push Arm Bracket	1
36	323-14	Capscrew	4
*	37-5790	Reflector	2
*	32104-42	Self-Tapping Screw	4

*Not Illustrated

PRODUCT CHANGES

In an effort to make improvements available to TORO owners as quickly as possible, minor changes are incorporated into Toro's products from time to time that do not become immediately shown in the Parts Catalog. If such a change apparently has been made in your unit, which is not reflected in your manual, see your TORO Distributor for information and part numbers.

IDENTIFICATION AND ORDERING

Model and Serial Numbers

The Groundsmaster 322-D has two identification numbers: a model number and a serial number. The two numbers are stamped on a plate which is riveted on main frame located under seat. In any correspondence concerning the Groundsmaster 322-D, supply model and serial numbers to assure that correct information and replacement parts are obtained.

To order replacement parts from an Authorized TORO Distributor, supply the following information.

1. Model and serial number of the Groundsmaster 322-D.
2. Part number, description, and quantity of part(s) desired.

NOTE: Do not order by reference number if a parts catalog is being used; use the PART NUMBER.

INDEX

Description	Page
Main Frame	1-2
Instrument Panel Assembly	3
Electrical Schematic	4
Radiator & Hood Assembly	5
Fuel Filter Assembly	6
Interlock Assembly	7
Power Take Off Assembly	8-9
Drive Shaft Assembly No. 21-3090 & 62-4260	10
Brake Pedal Assembly	11
Power Steering Assembly	12
Power Steering Valve Assembly No. 63-9250	13
Hydraulic Schematic	14
Front Axle and Fuel Tank Assembly	15
Differential Assembly No. 43-7630	16-17
Brake Assembly	18
Rear Axle and Wheel Assembly	19
Hydraulic Steering Cylinder Assembly No. 63-9240	20
Hydrostatic Transmission	21
Transmission Assembly No. 48-1790	22-23
Valve and Cylinder Assembly	24
Hydraulic Lift Cylinder Assembly No. 66-1250	25
Control Valve Assembly No. 43-1710	26
Engine Assembly	27-28
Engine	29-35
Fuel Injection Pump Assembly No. 42-8000	36-37
Nozzle and Holder Assembly No. 44-8070	38

Description	Page
Alternator Assembly No. 43-0390	39
Starter Assembly No. 46-7610	40
Air Cleaner Assembly	41
Push Arm Assembly	42
Cutting Unit Model No. 30721	43-44
Cutting Unit Model No. 30710	45-47
Gear Box Assembly No. 68-6810	48
Gear Box Assembly No. 63-9870	49
Rear Baffle Kit No. 51-1460 (Optional)	50
Mulcher Kit Model No. 30732 (Optional)	51
Cutting Unit Pneumatic Tire & Wheel Assembly No. 54-8810 (Optional)	52
Tire & Wheel Assembly 23 x 10.50 x 12 (Optional) No. 62-7020	53
Rear Weight Kit Model No. 24-5780 (Optional)	54
V-Plow Installation Kit Model No. 30757 (Optional)	55
V-Plow Model No. 30750 (Optional)	56
Standard Seat Kit Model No. 30770	57-58
Deluxe Seat Kit Model No. 30772	59
Deluxe Seat Adapter Kit Model No. 30791	60
Wheel Weights Model No. 11-0440 (Optional)	61
48" Snowthrower Model No. 30570 (Optional)	62-65
Adapter Kit 48" Snowthrower Model No. 30571 (Optional)	66

MAINTENANCE RECORD

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